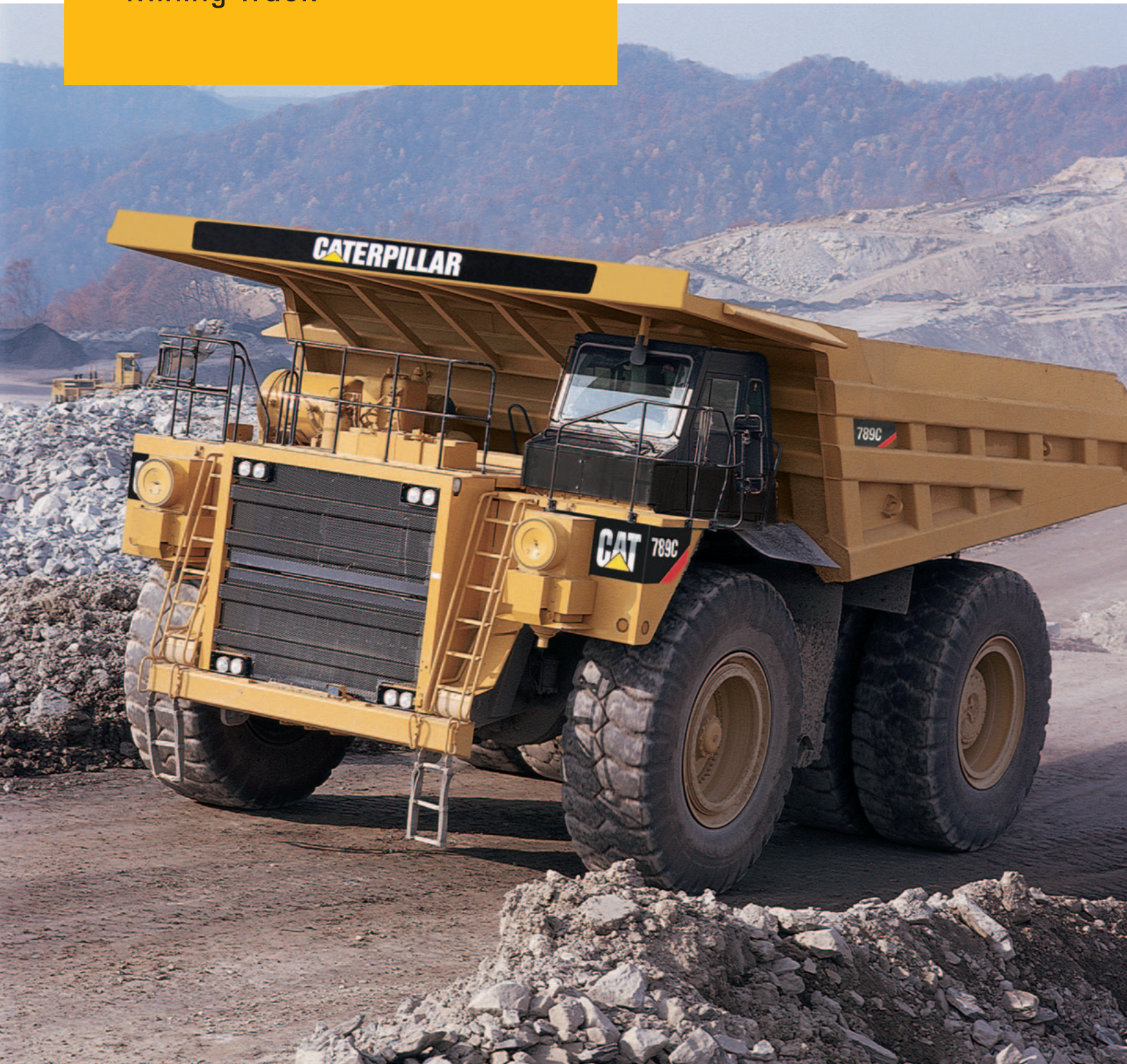


789C

Mining Truck



Engine

Engine Model	Cat® 3516B EUI	
Gross Power – SAE J1995	1417 kW	1,900 hp
Net Power – SAE J1349	1320 kW	1,771 hp

Weights – Approximate

Gross Machine Operating Weight	317 515 kg	700,000 lb
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Operating Specifications

Nominal Payload Capacity	177 tonnes	195 tons
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The 789C Mining Truck is engineered for performance, designed for comfort, and built to last. Developed specifically for high production mining and hauling applications, the 789C Mining Truck keeps material moving at high volume to lower your cost-per-ton.

Rugged construction creates a durable machine. Easy maintenance procedures ensure high reliability and long life with low operating costs.

Power Train – Engine

The Cat® 3516B EUI engine is built for power, reliability and efficiency for superior performance in the toughest applications.

Engine

The Cat® 3516B EUI Quad turbocharged and aftercooled diesel engine delivers high power and reliability in the world's most demanding mining applications.

Design

The 3516B is a 16-cylinder, four-stroke design that uses long, effective power strokes for more complete fuel combustion and optimum efficiency.

EPA Compliant

Where applicable, the 3516B engine is compliant with U.S. Environmental Protection Agency emissions requirements.

Altitude Compensation

Designed for maximum operating efficiencies at altitudes under 2300 m (7,500 ft).

High Torque Rise

The 23% net torque rise provides unequalled lugging force during acceleration, on steep grades and in rough underfoot conditions. Torque rise effectively matches transmission shift points for maximum efficiency and fast cycle times.

Enhanced Life

High displacement, low rpm rating, and conservative horsepower ratings mean more time on the haul roads and less time in the shop.

Separate Circuit Aftercooler

Allows the aftercooler circuit to operate cooler than jacket water temperature for a denser air charge and greater combustion efficiency.

Engine Protection

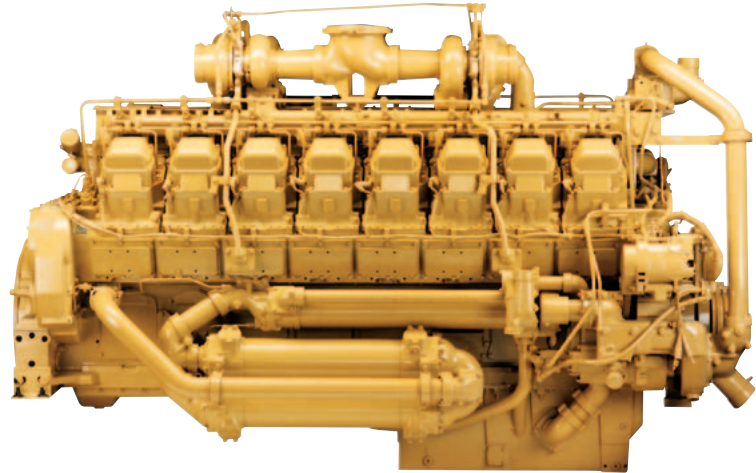
Computerized system electronically protects the engine during cold starts, high altitude operation, air filter plugging, and high exhaust temperature.

Electronic Control Module (ECM)

Utilizes advanced engine management software to monitor, control, and protect the engine utilizing self-diagnosing electronic sensors. The computerized system senses operating conditions and power requirements and adjusts engine for peak performance and most efficient operation and at all times.

Oil Renewal System

Optional oil renewal system extends engine oil change intervals from 500 hours to 4,000 hours or more to increase machine availability and reduce costs.



Power Train – Transmission

Cat mechanical power train delivers more power to the ground for greater productivity and lower operating costs.



Mechanical Power Train

The Cat mechanical drive power train and power shift transmission provides unmatched operating efficiency and control on steep grades, in poor underfoot conditions, and on haul roads with high rolling resistance.

1) Transmission

The Cat six-speed planetary power shift transmission is matched with the direct-injection 3516B diesel engine to deliver constant power over a wide range of operating speeds.

Robust Design

Designed for the higher horsepower of the 3516B engine, the proven planetary power shift transmission is built tough for long life between overhauls.

Transmission Chassis Control (TCC)

TCC uses electronically transferred engine rpm data to execute shifts at preset points for optimum performance, efficiency and clutch life.

2) Lock-Up Torque Converter

Combines maximum rimpull and cushioned shifting of torque converter drive with the efficiency and performance of direct drive. Engages at approximately 7.2 km/h (4.5 mph), delivering more power to the wheels.

3) Final Drives

Cat final drives work as a system with the planetary power shift transmission to deliver maximum power to the ground. Built to withstand the forces of high torque and impact loads, double reduction final drives provide high torque multiplication to further reduce drive train stress.

Wheels and Rims

Cast rear wheels and Cat center-mount rims are mounted using studs and nuts to minimize maintenance and maximize durability.

Steering System

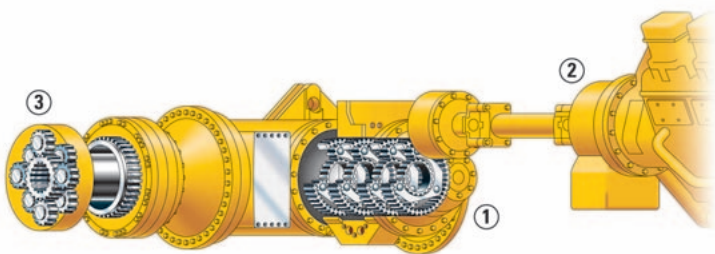
Hydraulic steering control system is designed for exceptional smoothness and precise control. A separate circuit prevents cross contamination for long life.

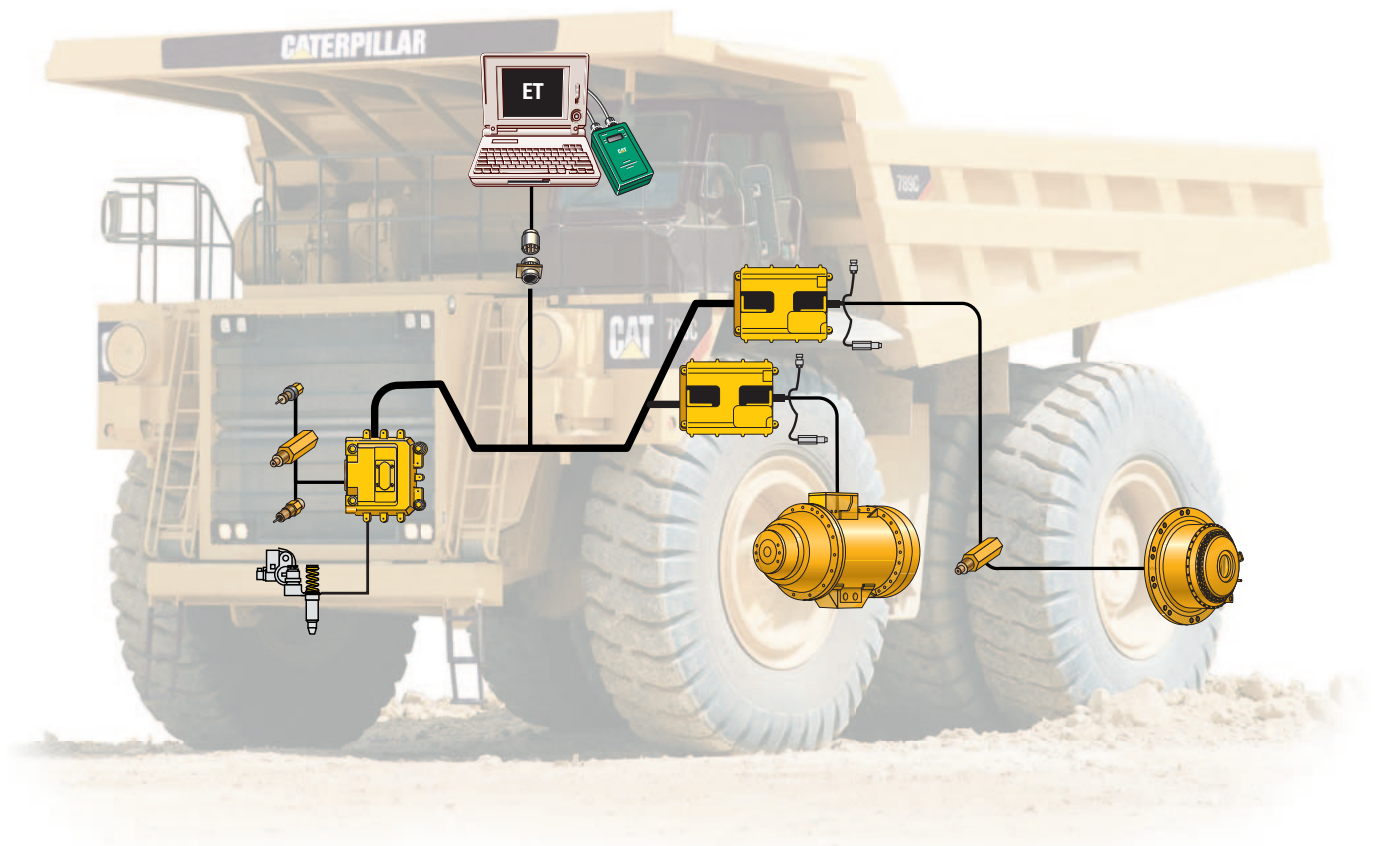
Supplemental Steering

Supplemental steering system uses pressure accumulators and allows up to three 90 degree turns in case of engine failure.

Long Life

A dedicated oil tank and circuit provides cooler, cleaner oil for maximum performance and longer component life.





Engine/Power Train Integration

Electronically combines critical power train components to work more intelligently and to optimize overall truck performance.

Cat Data Link

Electronically integrates machine computer systems to optimize overall power train performance, increase reliability and component life, and reduce operating costs.

Electronic Technician (Cat ET)

Cat ET service tool provides service technicians with easy access to stored diagnostic data through the Cat Data Link to simplify problem diagnosis and increase machine availability.

Integrated Braking Control (IBC)

Integrates Hydraulic Automatic Retarder Control and Traction Control into one system for optimum performance and efficiency.

Body-up Reverse Neutralizer

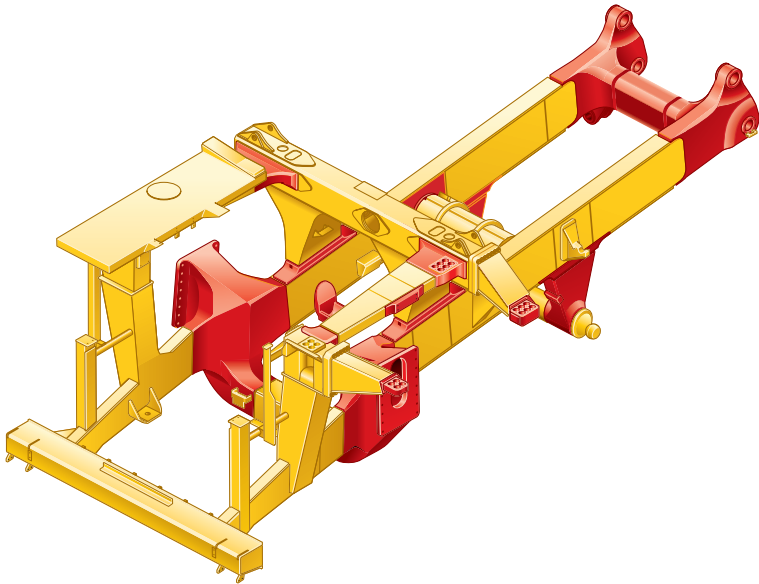
Automatically shifts the transmission to neutral if the hoist lever is activated while transmission is shifted in reverse.

Controlled Throttle Shifting

Regulates engine rpm during shifting to reduce power train stress and clutch wear by controlling engine speed, torque converter lock-up and transmission clutch engagement for smoother shifts and longer component life.

Structures

Rugged Cat structures are the backbone of the 789C mining truck's durability.



Box-Section Design

The 789C 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.

Serviceability

The open box-section frame design allows easy access to power train components, reducing overall removal and installation time, and lowering overall repair costs. The raised and pinned body allows excellent access to the transmission.

Steel Structures

Mild steel used throughout frame provides flexibility, durability, and resistance to impact loads, even in cold climates. Additionally, mild steel facilitates easy field repair.

Castings

Castings have large radii with internal reinforcing ribs to dissipate stress in areas of high stress concentration. Castings move welds to lower stress areas for greater frame life.

Integral Four-Post ROPS Cab

Resiliently mounted to the main frame to reduce vibration and sound, the integral ROPS is designed as an extension of the truck frame. The ROPS/FOPS structure provides “five sided protection” for the operator.

Suspension System

Designed to dissipate haul road and loading impacts for longer frame life and a more comfortable ride.

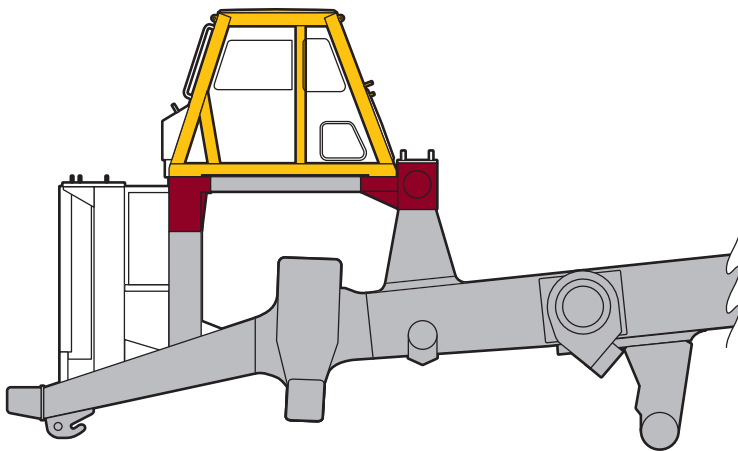
Cylinders

Four independent self-contained, oil pneumatic, variable-rebound suspension cylinders are designed to absorb shocks in the most severe applications.

Durable Design

Rugged cylinders utilize large diameter bore and low pressure nitrogen/oil design for long life with minimal maintenance.

- **Front.** Front cylinders with preset caster and camber are mounted to the frame and serve as steering kingpins for a tight turning radius with excellent maneuverability and low maintenance.
- **Rear.** Rear cylinders allow axle oscillation and absorb bending and twisting stresses caused by rough, uneven haul roads rather than transmitting them to the main frame.





Operator's Station

Ergonomically designed for operator comfort, superior control, and high productivity.

Enhanced Operator Visibility

Through the use of the fully Integrated Object Detection System, RADAR AND CAMERA, the operator can receive both audible and visual indications of detected objects.

Ergonomic Layout

The 789C operator station is ergonomically designed for total machine control in a comfortable, productive and safe environment. All controls, levers, switches and gauges are positioned to maximize productivity and minimize operator fatigue.

Quiet Cab

Integral, sound-suppressed ROPS/FOPS cab is resiliently mounted to the mainframe to isolate the operator from sound and vibration for a quiet, secure and comfortable ride.

Viewing Area

Designed for excellent all-around visibility and clear sight lines to the haul road. The large viewing area enables the operator to maneuver with confidence for high productivity.

1) Air Suspension Seat with Three-Point Operator Restraint 2) Hoist Lever 3) Secondary Brake Pedal 4) Monitoring System 5) Steering Column 6) Transmission Console 7) Parking Brake Reset Valve 8) Storage Compartment 9) Trainer Seat 10) Operator Window 11) Operator Controls 12) Heating/Air Conditioning

Radio Ready

The operator's station comes ready with power ports, speakers, antenna, and electrical connections to facilitate trouble-free radio installation. Consult your dealer for the complete line of available Cat radio options including satellite radio.

Cat[®] Brake System

Reliable braking with superior control gives the operator the confidence to focus on productivity.



Integrated Braking System

The Cat oil-cooled braking system delivers reliable performance and control in the most extreme haul road conditions. The integrated system combines the service, secondary, parking brake and retarding functions in the same robust system for optimum braking efficiency.

Four Corner Retarding

Four corner retarding with 60/40 percent split (rear/front) in braking effort provides superior control in slippery conditions. Balanced front to rear brake torque provides exceptional braking performance and minimizes wheel lock-up, especially during retarding.

Oil-Cooled Multiple Disc Brakes

Cat four-wheel, forced oil-cooled, multiple disc service brakes are continuously cooled by water-to-oil heat exchangers for exceptional, non-fade braking and retarding performance.

Optional Extended Life Disc Brakes

Extended life friction material has double the wear life of standard brakes and is twice as resistant to glazing for more consistent braking power with less noise.

Pistons

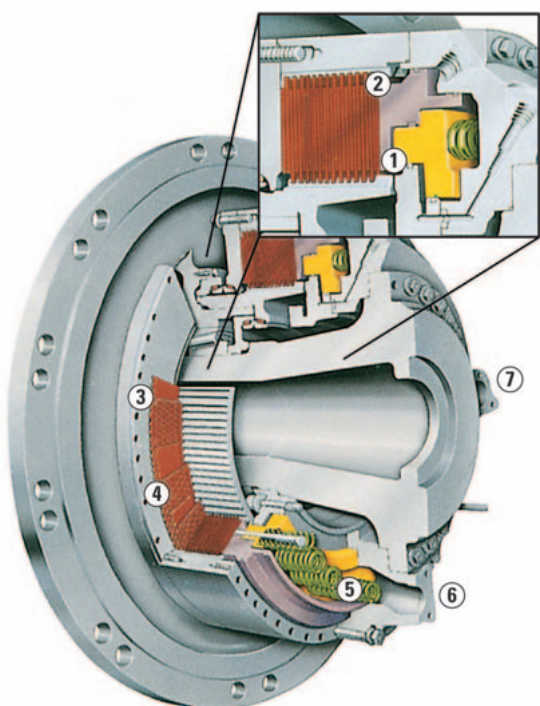
The Cat two-piece piston design combines the service, secondary, parking brake, and retarding functions in the same system. The primary piston hydraulically actuates both service and retarding functions. The secondary piston is spring-applied and held in the disengaged position by hydraulic pressure. If hydraulic system pressure drops below a specified level, the spring-applied secondary piston automatically applies the brakes.

Parking Brake

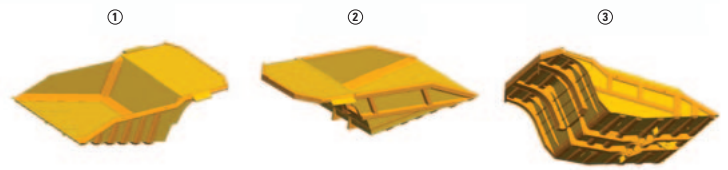
Oil-cooled, spring-applied, hydraulically released parking brake is applied to all four wheels for superior parking capability on all grades up to 15 percent.

Hydraulic Automatic Retarder Control (HARC)

Hydraulically activated automatic retarder control system 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. HARC is deactivated when the operator applies the brake or accelerator controls.



1) Parking/Secondary Piston 2) Service/Retarding Piston 3) Friction Discs
4) Steel Plates 5) Actuating Springs 6) Cooling Oil In 7) Cooling Oil Out



Truck Body Systems

Cat designed and built for rugged performance and reliability in the toughest mining applications.

Cat Truck Bodies

Matching the truck body to the application is a critical part of achieving the best value from your 789C. Caterpillar offers a variety of application specific body options that yield a payload ranging from 177 to 188 metric tons (195 to 207 tons). The Caterpillar exclusive 10/10/20 payload guidelines help achieve a balance of excellent payload with safe operation.

Body Options

- 1) Cat "X" Body** – The X body is a heavy duty body configured with a variety of liner options to meet site specific requirements of a mine. Like the Dual Slope – the X body is designed for durability across a range of harsh applications.
- 2) Mine Specific Body (MSD II)** – For mature mines with good operational and maintenance practices, the lighter weight MSD II (Mine Specific Design) body is available in several sizes. It is a customer/site specific body that is designed to maximize performance. The MSD II is designed to maximize payload, provide good durability and can be configured with a variety of liner options to meet the specific requirements of the mine.
- 3) Gateless Coal Body** – This specialized high volume body, available in several sizes, is targeted at dedicated coal haulage applications with minimal impact. The kicked up floor design eliminates the tailgate and gives the volume required to meet target payload.
- 4) Dual Slope Body** – The original standard body, the Dual Slope body, provides excellent load retention, maintains a low center of gravity with optimum load distribution, reduces shock loading and is available in lined and unlined configurations. The Dual Slope body is intended for tough applications including greenfield sites and contracting mines.

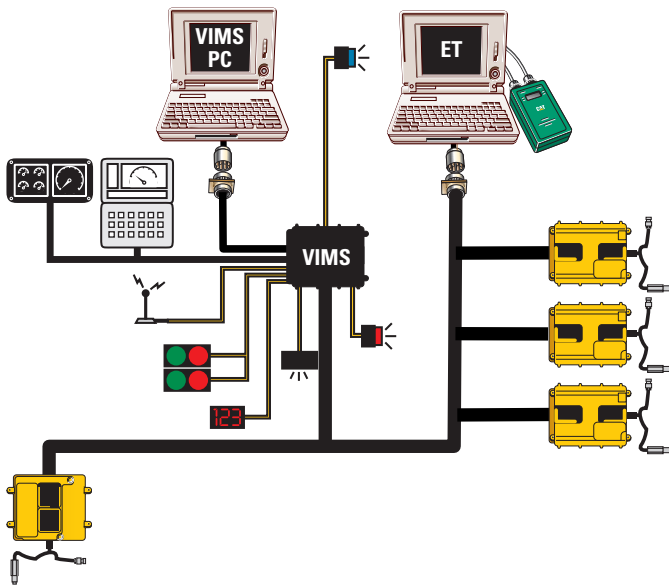
Custom Body Options

A variety of options including tail extensions, sideboards, tumble bars, rock boxes and rock shedders are available to maintain rated payload, reduce spillage and improve hauling efficiencies.

1) X Body 2) MSD II Body 3) Gateless Coal Body 4) Dual Slope Body (not shown)

Monitoring System

Vital machine health and payload data keeps the 789C performing at peak production levels.



VIMS™ Monitoring System

Intelligent Caterpillar designed machine monitoring system provides critical machine health and payload data in real-time to keep the 789C performing at top production levels.

Production Management

Production Management enhances truck/loading tool effectiveness, improves fleet productivity and helps extend the life of truck frames, tires, rims and power train components, while lowering operating and maintenance cost.

Payload Management

Max Payload Speed Manager is a feature that aids in managing the Cat 10/10/20 Overload Policy. Based on target payload weight and overload settings, the VIMS system logs and warns the operator when the truck reaches overload after 2nd gear reweigh. The truck will be limited to 2nd gear at 1,750 rpm, and the automatic retarder speed setting is reduced to 1,750 rpm until the load is dumped.

Payload management enables the manager to enhance truck/loading tool effectiveness and productivity levels by preventing overloads that can cause damage to component life and affect operator safety.

Road Analysis Control (RAC)

Optional system monitors haul road conditions by measuring frame rack, pitch, and bias to improve haul road maintenance, cycle times, tire life, and fuel efficiency.

VIMS-PC

VIMS-PC, the off-board reporting software program, allows service personnel to download a complete record of machine health and productivity data to a laptop computer for diagnosis and analysis. Easy-to-use software enables service technicians and mine management to generate health and payload reports for more effective machine management.

VIMS Supervisor

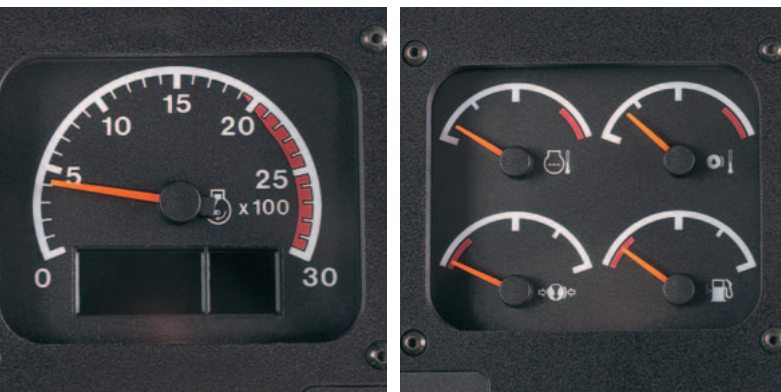
Optional software allows mine management to easily manage and interpret VIMS data for optimum fleet management and productivity.

Machine Management

Service technicians or mine personnel can download data and generate reports for better machine management. Data can be used to improve effectiveness of scheduled maintenance programs, maximize component life, improve machine availability, and lower operating costs.

Gauge Cluster

Conveniently located gauge cluster maintains a constant display of vital machine functions.





Safety

Cat mining machines and systems are designed with safety as their first priority.

Product Safety

Caterpillar has been and continues to be proactive in developing mining machines that meet or exceed safety standards. Safety is an integral part of all machine and system designs.

Integrated Object Detection Systems

Object Detection Systems are factory installed as standard equipment on 789C mining trucks. The fully Integrated Object Detection System, RADAR AND CAMERA, provides both audible and visual indications of detected objects. This system uses a combination of short and medium range radars which surround the machine, along with cameras on each side to allow the operator to confirm the detected object. The cameras supplement the radar alerts and are selectable by touch screen menus through an intuitive interface.

Overload Policy

Adherence to the Caterpillar 10/10/20 Overload Policy assures that steering and braking systems have sufficient capacity to perform.

Standard Safety Features

Slip resistant surfaces, retractable, seat/shoulder belts with three-point operator restraint, wide-angle mirrors, body raised indicator, body retaining cable, guard rails, reverse neutralizer when dumping, low interior sound level, secondary steering system, ground level access shutoff switches.

SAFETY.CAT.COM™



Sustainability

A variety of features improve sustainability in areas of decreasing waste, extending component life and lowering emissions levels.

Sustainability Features

The 789C Mining Truck offers oil renewal systems, extended life filters and extended maintenance intervals which aid in decreasing the amount of waste contributed to our environment.

Oil Renewal System

Optional oil renewal system extends engine oil change intervals from 500 hours to 4,000 hours or more to increase machine availability and reduce costs.

Engines with Advanced Technology

Engines with advanced technology contribute less emissions to the environment while maintaining fuel efficiency.

Fuel Efficiency

The engine provides additional retarding by running against compression on downhill hauls. During retarding applications the engine ECM does not inject fuel into the cylinders for exceptional fuel economy.

Serviceability

Less time spent on maintenance means more time on the haul roads.

Servicing Ease

Easy access to daily service points simplifies servicing and reduces time spent on regular maintenance procedures. Enhanced serviceability and 500-hour service intervals are designed to increase machine availability and productivity.

Maintenance Platform

Provides access to engine, air filters, steering hydraulic tank, and battery compartment.

In-Frame Access

Permits easy access to major components for easy servicing and removal.

Ground-Level Access

Allows convenient servicing to tanks, filters, drains, and engine shutdown. Ground-level VIMS data port permits easier downloading of information.

Autolube

Automatic lubrication system reduces maintenance time by automatically lubricating necessary components on a regular basis.

Fast Fill Service Center

Optional Wiggins fast fill service center features high speed fuel and oil exchange.

Scheduled Oil Sampling

S•O•SSM sampling valves speed sampling and analysis reliability.

Pressure Test Points

Disconnect valves are conveniently located throughout the hydraulic systems for easy pressure testing.

Sealed Electrical Connectors

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

Cylinder Heads

Individual cylinder heads are interchangeable for easy removal and visual inspection of internal parts.

On-Board Diagnostic Systems

The VIMS system continuously monitors all critical machine functions and components to help locate faults quickly for faster repair. Electronic Control Systems provide diagnosis of engine, transmission, brake, and chassis systems. Service Technicians utilize the Electronic Technician service tool (Cat ET) to program and troubleshoot these systems.





Customer Support

Cat dealers have what it takes to keep mining haul trucks productive.

Commitment Makes the Difference

Cat dealers offer a wide range of solutions, services and products that help you lower costs, enhance productivity and manage your operation more efficiently. Support goes far beyond parts and service. From the time you select a piece of Cat equipment until the day you rebuild, trade or sell it, the support you get from your Cat dealer makes the difference that counts.

Dealer Capability

Cat dealers will provide the level of support you need, on a global scale. Dealer expert technicians have the knowledge, experience, training and tooling necessary to handle your repair and maintenance needs, when and where you need them.

Product Support

Cat dealers believe superior products deserve superior support. When Cat products reach the field, they are supported by a worldwide network of parts distribution facilities, dealer service centers, and technical training facilities to keep your equipment up and running. Cat customers rely on prompt, dependable parts availability and expertise through our global dealer network, ready to meet your needs 24/7.

Technology Products

Cat dealers offer a range of advanced technology products such as VIMS monitoring system and MineStar® information management system. These products include radio data communications, machine monitoring and diagnostics, fleet management, and haul road maintenance software – all designed to improve fleet efficiency, increase productivity, and lower costs.

www.cat.com

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

789C Mining Truck Specifications

Engine

Engine Model	Cat 3516B EUI	
Gross Power – SAE J1995	1417 kW	1,900 hp
Net Power – SAE J1349	1320 kW	1,771 hp
Net Power – ISO 9249	1335 kW	1,791 hp
Net Power – 80/1269/EEC	1335 kW	1,791 hp
Bore	170 mm	6.7 in
Stroke	190 mm	7.5 in
Displacement	69 L	4,211 in ³

- Power ratings apply at 1,750 rpm when tested under the specified conditions for the specified standard
- Ratings based on SAE J1995 standard air conditions of 25° C (77° F) and 100 kPa (29.61 Hg) barometer. Power based on fuel having API gravity of 35 at 16° C (60° F) and an LHV of 42 780 kJ/kg (18,390 BTU/lb) when engine used at 30° C (86° F).
- No engine derating required up to 2300 m (7,500 ft) altitude
- Where applicable, the 3516B engine is compliant with U.S. Environmental Protection Agency emissions requirements.

Weights – Approximate

Gross Machine Operating Weight	317 515 kg	700,000 lb
Chassis Weight	99 020 kg	218,300 lb
Body Weight Range	26 800- 29 950 kg	59,000- 71,500 lb

- Chassis weight with hoist, body mounting group and tires.
- Body weight varies depending on how body is equipped.

Operating Specifications

Nominal Payload Capacity	177 tonnes	195 tons
Body Capacity (SAE 2:1)	105 m ³	137 yd ³
Maximum Capacity	Custom	
Top Speed – Loaded	52.6 km/h	32.7 mph
Steer Angle	36°	
Turning Diameter – Front	27.5 m	90 ft 2 in
Turning Circle	30.2 m	99 ft 2 in
Clearance Diameter		

- Body capacity (SAE 2:1) with Dual Slope Body.
- Refer to the Cat Mining Truck 10/10/20 Overload Policy for maximum gross machine weight limitations.

Transmission

Forward 1	11.6 km/h	7.2 mph
Forward 2	15.7 km/h	9.8 mph
Forward 3	21.3 km/h	13.2 mph
Forward 4	28.7 km/h	17.8 mph
Forward 5	38.9 km/h	24.2 mph
Forward 6	52.6 km/h	32.7 mph
Reverse	10.5 km/h	6.5 mph

- Maximum travel speeds with standard 37.00-R57 tires.

Final Drives

Differential Ratio	2.35:1	
Planetary Ratio	10.83:1	
Total Reduction Ratio	25.46:1	

- Double-reduction, planetary, with full floating axles.

Suspension

Effective Cylinder Stroke – Front	105 mm	4 in
Effective Cylinder Stroke – Rear	93 mm	3.5 in
Rear Axle Oscillation	±5.6°	

Brakes

Brake Surface – Front	81 693 cm ²	12,662 in ²
Brake Surface – Rear	116 283 cm ²	18,024 in ²
Standards	SAE J1473 OCT90 ISO 3450:1996	

- Gross Machine Operating Weight is 317 515 kg (700,000 lb).

Body Hoists

Pump Flow – High Idle	731 L/min	193 gal/min
Relief Valve Setting – Raise	17 238 kPa	2,500 psi
Body Raise Time – High Idle	18.9 Seconds	
Body Lower Time – Float	17.3 Seconds	
Body Power Down – High Idle	15.6 Seconds	

- Twin, two-stage hydraulic cylinders mounted inside main frame; double-acting cylinders in second stage.
- Power raise in both stages; power down in first stage.
- Automatic body-lower modulation reduces impact on frame.

789C Mining Truck Specifications

Approximate Weights – Dual Slope

Gross Weight – Empty	140 852 kg	310,525 lb
Chassis	102 285 kg	225,500 lb
Body	27 045 kg	59,625 lb
Full Liner	9453 kg	20,840 lb
Tail Extension	771 kg	1,700 lb
Side Boards	1297 kg	2,860 lb

- Includes common arrangement, 100% fuel, starting system, seats, fan arrangement, exhaust system, tires, rims and 4% debris allowance.

Approximate Weights – Flat Floor

Gross Weight – Empty	135 670 kg	299,100 lb
Chassis	102 240 kg	225,400 lb
Body	30 018 kg	66,200 lb
Grid Liner	1500 kg	3,300 lb
Rear Third Liner	1905 kg	4,200 lb

- Includes common arrangement, 100% fuel, starting system, seats, fan arrangement, exhaust system, tires, rims and 4% debris allowance.

Weight Distributions – Approximate

Front Axle – Empty	47%
Rear Axle – Empty	53%
Front Axle – Loaded	33%
Rear Axle – Loaded	67%

Capacity – Dual Slope – 100% fill factor

Struck	73 m ³	96 yd ³
Heaped (SAE 2:1)	105 m ³	137 yd ³

Capacity – Flat Floor – 100% fill factor

Struck	92 m ³	102 yd ³
Heaped (SAE 2:1)	121 m ³	158 yd ³

Tires

- | | |
|---------------|----------------|
| Standard Tire | 37.00-R57 (E4) |
|---------------|----------------|
- Productive capabilities of the 789C truck are such that, under certain job conditions, TKPH (TMPH) capabilities of standard or optional tires could be exceeded and, therefore, limit production.
 - Caterpillar recommends the customer evaluate all job conditions and consult the tire manufacturer for proper tire selection.

Service Refill Capacities

Fuel Tank	3222 L	851 gal
Cooling System	663 L	175 gal
Crankcase	291 L	77 gal
Differentials and Final Drives	583 L	154 gal
Steering Tank	130 L	34 gal
Steering System (Includes Tank)	189 L	50 gal
Brake/Hoist Hydraulic Tank	531 L	140 gal
Brake/Hoist System (Includes Tank)	909 L	240 gal
Torque Converter/Transmission Sump	224 L	59 gal
Torque Converter/Transmission System (Includes Sump)	76 L	20 gal

ROPS

- ROPS Standards
- ROPS (Rollover Protective Structure) for cab offered by Caterpillar meets ISO 3471:1994 ROPS criteria.
 - FOPS (Falling Objects Protective Structure) meets ISO 3449:1992 Level II FOPS criteria.

Sound

Sound Standards

- The operator sound pressure level measured according to work cycle procedures specified in ANSI/SAE J1166 MAY90 is 74 dB(A) for cab offered by Caterpillar, when properly installed and maintained and tested with doors and windows closed.
- The exterior sound pressure level for the standard machine measured at a distance of 15 m (49 ft) according to the test procedures specified in SAE J88 APR95, mid-gear moving operation is 82 dB(A).
- Hearing protection may be needed when operating with an open operator station and cab (when not properly maintained or doors/windows open) for extended periods or in a noisy environment.

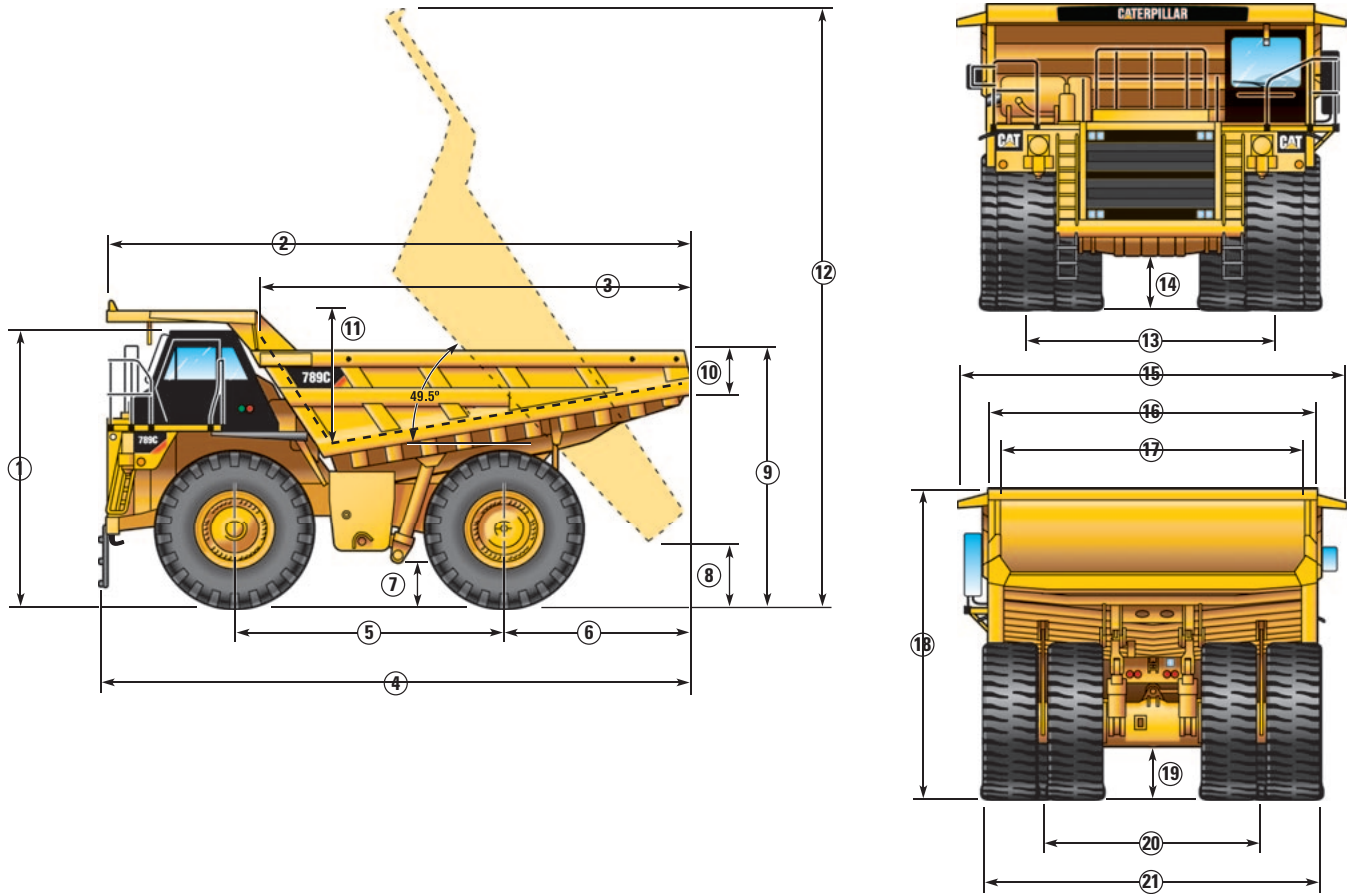
Steering

Steering Standards SAE J1511 OCT90
ISO 5010:1992

- Gross Machine Operating Weight is 317 515 kg (700,000 lb)

Dimensions

All dimensions are approximate. Shown with Dual Slope Body.



	Dual Slope		Flat Floor	
1 Height to Top of ROPS	5495 mm	18 ft	5495 mm	18 ft
2 Overall Body Length	11 630 mm	38 ft 2 in	11 630 mm	38 ft 2 in
3 Inside Body Length	8154 mm	26 ft 9 in	8154 mm	26 ft 9 in
4 Overall Length	12 177 mm	39 ft 11 in	12 177 mm	39 ft 11 in
5 Wheelbase	5700 mm	18 ft 8 in	5700 mm	18 ft 8 in
6 Rear Axle to Tail	3617 mm	11 ft 10 in	3617 mm	11 ft 10 in
7 Ground Clearance	1173 mm	3 ft 10 in	1173 mm	3 ft 10 in
8 Dump Clearance	1330 mm	4 ft 4 in	1562 mm	5 ft 2 in
9 Loading Height – Empty	5206 mm	17 ft 1 in	5715 mm	18 ft 9 in
10 Rear Sidewall Height	1067 mm	3 ft 6 in	960 mm	3 ft 2 in
11 Inside Body Depth – Max	2613 mm	8 ft 7 in	2650 mm	8 ft 8 in
12 Overall Height – Body Raised	11 902 mm	39 ft 1 in	11 950 mm	39 ft 3 in
13 Centerline Front Tire Width	5430 mm	17 ft 9 in	5430 mm	17 ft 9 in
14 Engine Guard Clearance	1195 mm	3 ft 11 in	1195 mm	3 ft 11 in
15 Overall Canopy Width	7674 mm	25 ft 2 in	7974 mm	26 ft 2 in
16 Outside Body Width	6940 mm	22 ft 9 in	7558 mm	24 ft 10 in
17 Inside Body Width	6500 mm	21 ft 4 in	7112 mm	23 ft 4 in
18 Front Canopy Height	6150 mm	20 ft 2 in	6182 mm	20 ft 3 in
19 Rear Axle Clearance	1225 mm	4 ft	1225 mm	4 ft
20 Centerline Rear Dual Tire Width	4622 mm	15 ft 1 in	4622 mm	15 ft 1 in
21 Overall Tire Width	6926 mm	22 ft 8 in	6926 mm	22 ft 8 in

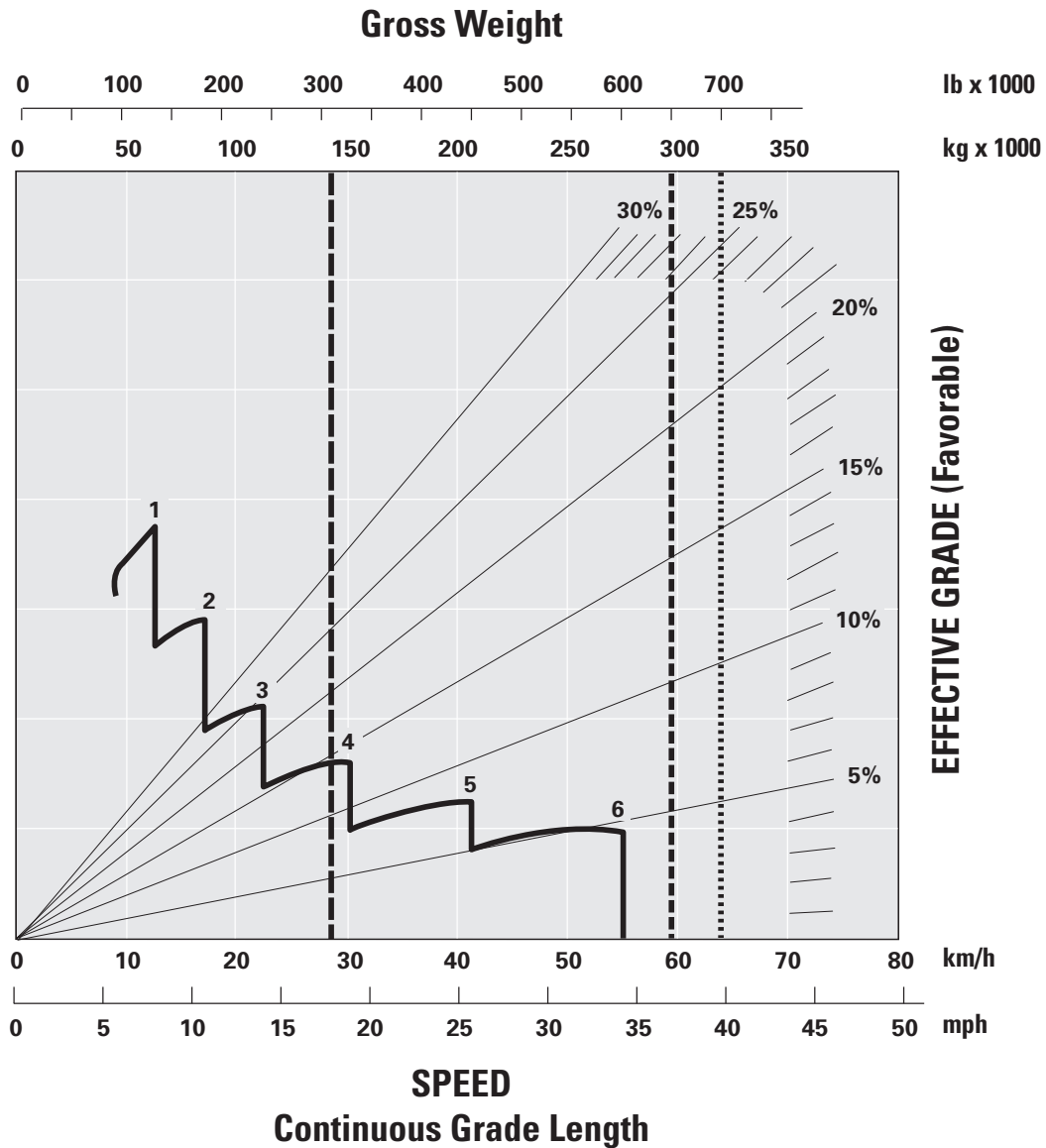
789C Mining Truck Specifications

Retarding Performance

To determine retarding performance: Add lengths of all downhill segments and, using this total, refer to proper retarding chart. Read from gross weight down to the percent effective grade. Effective grade equals actual % grade minus 1% for each 10 kg/t (20 lb/ton) of rolling resistance. From this weight-effective grade point, read horizontally to the curve with the highest obtainable gear, then down to maximum descent speed brakes can properly handle without exceeding cooling capacity. The following charts are based on these conditions: 32° C (90° F) ambient temperature, at sea level, with 37R57 tires.

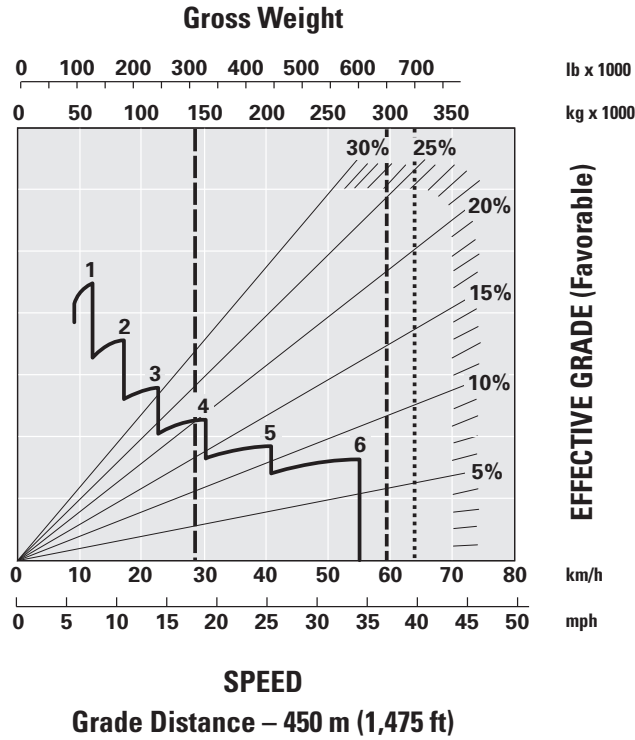
NOTE: Select the proper gear to maintain engine rpm at the highest possible level, without overspeeding the engine. If cooling oil overheats, reduce ground speed to allow transmission to shift to the next lower speed range.

- Typical Field Empty Weight
- 154 244 kg (340,000 lb) Load
- 176 900 kg (390,000 lb) Load

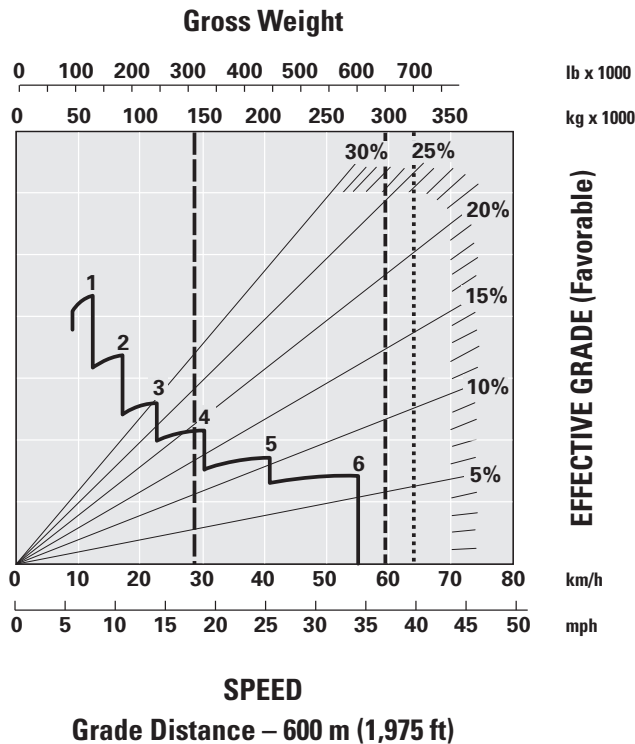


Retarding Performance

- Typical Field Empty Weight
- 154 244 kg (340,000 lb) Load
- 176 900 kg (390,000 lb) Load



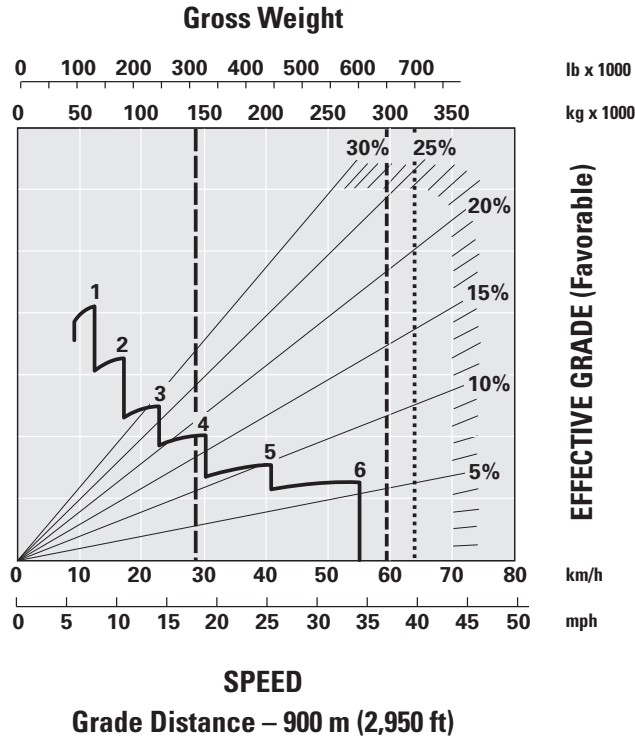
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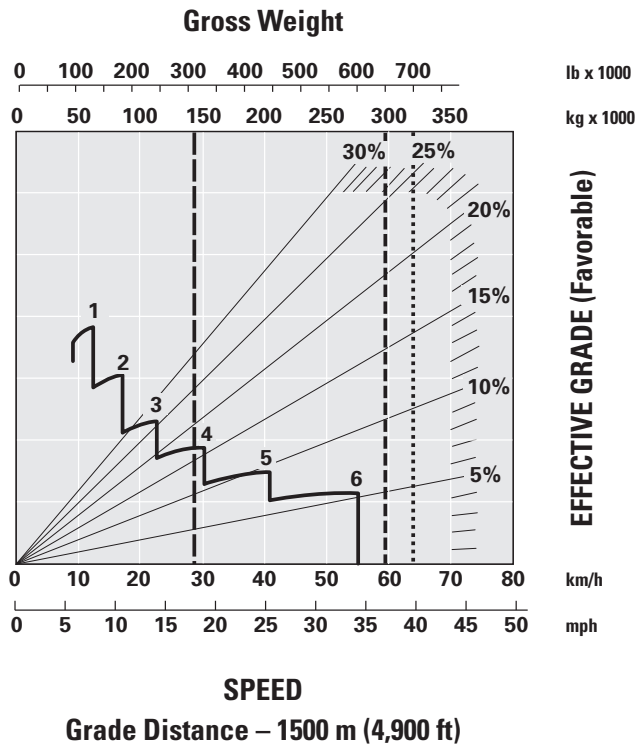
789C Mining Truck Specifications

Retarding Performance

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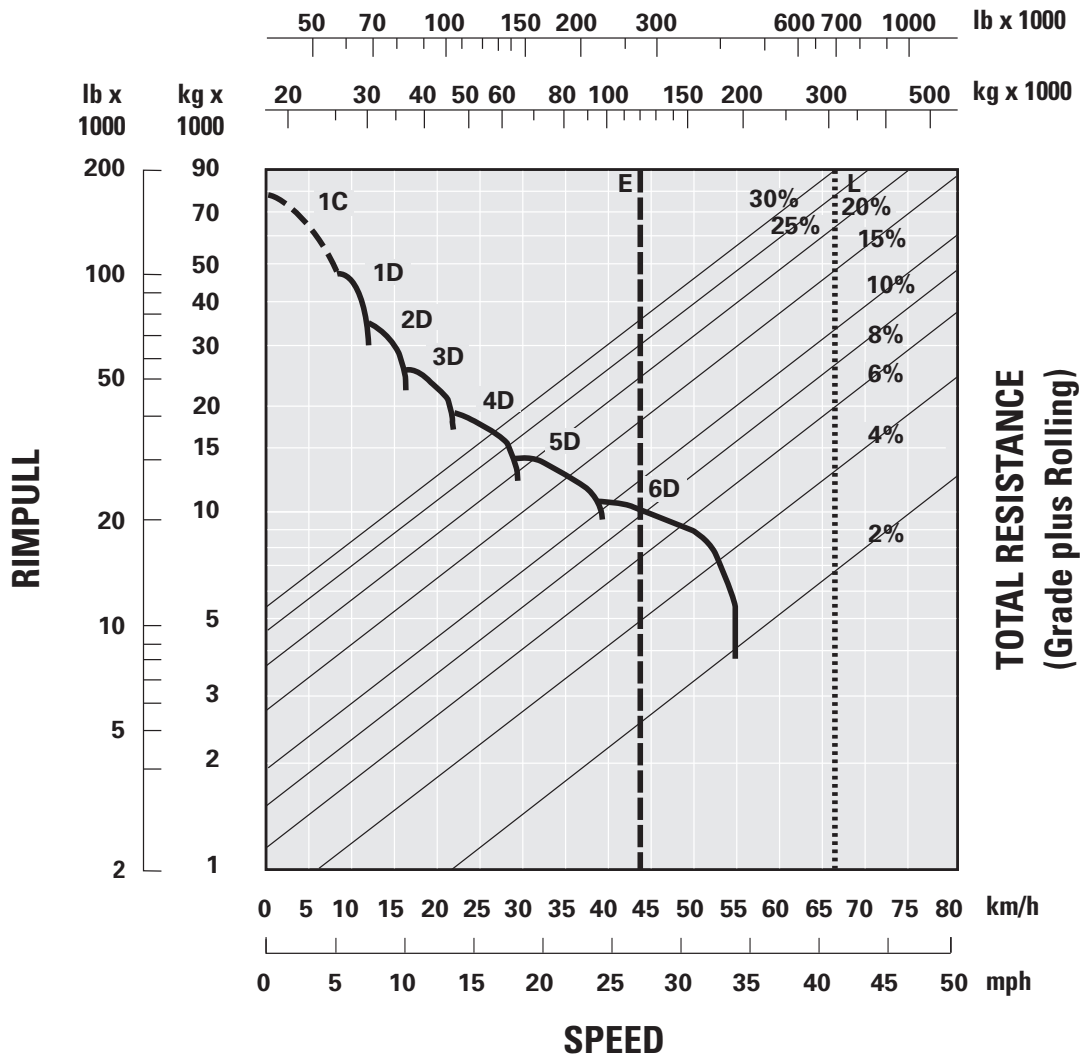


Gradeability/Speed/Rimpull

To determine gradeability performance: Read from gross weight down to the percent of total resistance. Total resistance equals actual percent grade plus 1% for each 10 kg/t (20 lb/ton) of rolling resistance. From this weight-resistance point, read horizontally to the curve with the highest obtainable gear, then down to maximum speed. Usable rimpull will depend upon traction available and weight on drive wheels.

- Typical Field Empty Weight
- 176 900 kg (390,000 lb) Load

37.00-R57 Tires Gross Weight



- Torque Converter Drive
- Direct Drive

- E – Empty
- L – Loaded

789C Mining Truck Specifications

Weight/Payload Calculation

(Example)

	Flat Floor		Dual Slope	
	kg	lb	kg	lb
Chassis ¹	69 853	154,000	69 853	154,000
Body Mounting Group	816	1,800	862	1,900
Tires (6) 37.0-R57	18 370	40,500	18 370	40,500
Rims (6) 29-57	9253	20,400	9253	20,400
Total Weight	98 293	216,700	98 339	216,800
Debris Allowance (4% of total weight)	3900	8,700	3900	8,700
Body Weight ²	30 018	66,200	27 045	59,625
Liners (optional) ³	1905	4,200	9453	20,840
Tail Extension (optional)			771	1,700
Side Boards (optional)			1297	2,860
Gross Machine Weight (empty)	134 173	295,800	140 852	310,525

¹ Includes: common arrangement, 100% fuel, starting system, seats, fan arrangement, exhaust system

² Flat Floor with grid liner

³ Flat Floor with optional rear third liner. Dual Slope with optional full liner.

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

Air Line Dryer (2)	Driveline Guard	Reservoirs (Separate)
Air Starter, Vane-type	Dumping, Auxiliary Quick Connect for "Buddy Dumping"	Brake/Converter/Hoist
Alarm, Back-up	Electrical System, 12-volt to 24-volt	Steering
Alternator (105-amp)	Engine – Cat 3516B EUI Diesel Engine	Transmission
Automatic Lubrication System (Lincoln)	Air Cleaner with Precleaner (2)	Rims, Center Mounted for 37.00-R57 Tires
Automatic Retarder Control	Elevated Low Idle Control	Rock Ejectors
Batteries, 93-amp-hour, Low-maintenance, 12-volt (2)	Ether Starting Aid, Automatic	Steering, Auxiliary Quick Connect for Towing
Body Mounting Group	Multi-Point Oil Pressure Sensing	Tie Down Eyes
Body Retaining Cable	Turbocharger (4)/Aftercooler	Tow Hooks, Front
Brake Release Motor for Towing	Fast-fill Fuel System, Wiggins	Tow Pin, Rear
Brake System	Ground Level	Traction Control System
Oil-cooled, Multiple-disc, Front and Rear	Battery Disconnect	Transmission
Parking	Engine Shutdown	6-speed, Automatic Power Shift
Secondary, Emergency	VIMS Dataports (2)	Body-up Shift Inhibitor
Cab, ROPS/FOPS	Lighting System	Controlled Throttle Shifting
Air Cleaner Service Indicator	Back-up Lights, Halogen	Directional Shift Management
Air Conditioner	Direction Signals and Hazard Warning (Rear Halogen)	Electronic Control and Downshift Inhibitor
Ashtray	External Payload Lights, red/green	Lock-up Torque Converter
Cigarette Lighter	Headlights, Halogen, with Dimmer	Neutral Coast Inhibitor
Coat Hook	LH Ladder Light and Service Deck Lights	Neutral Start Switch, Reverse Shift Inhibitor
Diagnostic Connector	Stop and Tail Lights (LED)	Programmable Top Gear
Electric Engine Control Fault Indicator	Under-hood Light	Reverse Neutralizer during Dumping
Electric Window (Operator Only)	Oil Change System, Quick Service	Vandalism Protection Locks
Entertainment Radio Ready		VIMS Monitoring System with Max Payload Speed Manager
Glass, Tinted		
Heater/defroster: 11 070 kCal (43,930 BTU)		
Horn		
Insulated and Sound Suppressed		
Integrated Object Detection System		
Dome Courtesy Light		
Mirrors, Right and Left		
Quad-Gauge Panel		
Air Pressure		
Brake Oil Temperature		
Coolant Temperature		
Fuel Level		
Seat, Air Suspension, 3-point Operator Restraint		
Seat, Passenger, Non-suspension		
Seat Belts, 3-point, 75 mm (3 in) wide retractable		
Speedometer		
Steering, Automatic Supplemental		
Steering Wheel, Tilt, Padded, Telescopic		
Storage Compartment		
Sun Visor		
Tachometer		
Transmission Gear Indicator		
VIMS Keypad		
VIMS Message Center with Universal Gauge		
Windshield Wiper and Washer		

789C Optional Equipment

Optional equipment may vary. Consult your Cat dealer for details.

	kg	lb		kg	lb		kg	lb
Bodies	see Weight/Payload Calculation chart		Heater, fuel recirculation type, non-electric	2	5	Prelube system	11	25
Body extensions (dual slope):			Heater, engine coolant and oil 120-volt external power source	2	5	Rim, spare for 37.0-R57 tire	1542	3,400
Tail	770	1,700	Hub odometer – km (miles)	7	15	Road Analysis Control (RAC)	6	13
Sideboards ¹	1300	2,866	Muffler	227	500	Starting system		
Body heat (exhaust)	36	80	Oil Renewal System	7.7	17	Air (TDI Turbine)	-5	-10
Body and tail extension liners ²						Air (IR Turbine)	23	50
Full-length liner	7633	16,828				Variable speed fan, Rockford	259	570
Tail extension liner ³	338	745				Vessels – EU	0	0
Brake oil recirculating (custom)	127	280				Wiggins (custom)	40	88
Brakes, extended life disc	–	–						
Display, external payload LED, LH/RH	64	141						
Fuel tanks								
850 gal/3222 L	1197	2,640						
1,000 gal/3785 L	1383	3,050						

¹ Increases capacity to 120 m³/157 yd³

² Minimum yield strength 900 MPa/9000 Bar/130,500 psi; 400 Brinell steel

³ Use with full liners when tail extension used

789C Mining Truck

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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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