## Engine Specifications

<table>
<thead>
<tr>
<th>Engine</th>
<th>Cat® C175-16</th>
</tr>
</thead>
<tbody>
<tr>
<td>Net Power – SAE J1349</td>
<td>1848 kW 2,478 hp</td>
</tr>
</tbody>
</table>

## Operating Specifications

<table>
<thead>
<tr>
<th>Operating Specifications</th>
<th>226.8 tonnes 250 tons</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nominal Payload Capacity</td>
<td>226.8 tonnes 250 tons</td>
</tr>
<tr>
<td>Gross Machine Operating Weight</td>
<td>386 007 or 390 089 kg (851,000 or 860,000 lb)</td>
</tr>
</tbody>
</table>
The proven Cat® 793 is the industry leader of its class and now the 793F continues this tradition with advancements to safety, productivity, serviceability and comfort. Whether hauling copper, coal, gold, iron ore or overburden, the 793F will deliver the lowest cost per ton. Combine the features of the 793F with unmatched dealer support and you will see why more customers choose Cat Mining Trucks for their production needs.

793F Features

High Performance Engine
The Cat® C175-16 engine offers the perfect balance between power, robust design and economy.

Enhanced Serviceability
Designed with improved serviceability points and grouped services locations so more time is spent on the haul roads and less time in the shop.

Power Shift Transmission
Electronic Clutch Pressure Control (ECPC) gives the 793F six speed transmission smooth shifts while providing constant power and efficiency for peak power train performance.

Reliable Mechanical Drive System
The Cat mechanical drive power train provides unmatched operating efficiency.

Robust Braking
Cat oil-cooled, multiple disc brakes on all four corners offer exceptional, fade-resistant braking in all haul road conditions.

Comfortable Cab
Large, spacious cab offers unmatched visibility and exceptional operator comfort.

Truck Body
A variety of Caterpillar designed and built bodies ensure optimal performance and reliability in tough mining applications.

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Power Train – Engine
The Cat® C175-16 engine is built for power, reliability and efficiency.

Engine
The Cat® C175-16 quad turbocharged and air-to-air aftercooled diesel engine has enhanced power management capability for maximum hauling performance in the most demanding mining applications.

Design
The C175-16 is a 16-cylinder, four-stroke design that uses long, effective power strokes for optimum efficiency.

EPA Compliant
The Cat C175-16 engine is compliant with U.S. EPA Tier 2 emissions standards.

High Torque Rise
The 20 percent 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.

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

Cat Common Rail Fuel System
The electronically-controlled system senses operating conditions and regulates fuel delivery for optimum fuel efficiency. This precise and flexible fuel system gives the engine the ability to meet emission regulations without sacrificing performance, reliability or durability.

Cooling System
The MESABI® Radiator comes standard on the 793F. The flexible core design offers long life, high durability and easy serviceability.

Starter Options
The tank on the standard air start system is ground level serviceable, while the electric start option allows the air system to be totally removed from the truck.
Power Train – Transmission
More power to the ground for greater productivity.

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. The 793F is the fastest truck on grade in its class.

1 – Transmission
The Cat six-speed planetary power shift transmission is matched with the direct-injection C175-16 diesel engine to deliver constant power over a wide range of operating speeds.

- Robust Design – Designed for the higher power of the C175-16 engine, the proven planetary power shift transmission is built tough.
- Long Life – A dedicated oil tank and circuit provides cooler, cleaner oil for maximum performance and longer component life.

Electronic Clutch Pressure Control
ECPC provides maximum performance, smooth shifting, long clutch life and a more comfortable ride.

2 – Lock-Up Torque Converter
Combines maximum rimpull and cushioned shifting of torque converter drive with the efficiency and performance of direct drive. The lock-up torque converter engages at approximately 8 km/h (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.
Power Train Options
Two power train options to match your applications/conditions.

Extended Life Wheel Stations
Developed for uphill hauling applications, this arrangement is designed to extend wheel life and hauling performance on long, uphill hauls. Extended life wheel stations are built with larger, more durable components, including larger spindles, wider wheel bearing spacing, a larger braking surface and additional discs in the front for longer brake life and more time between overhauls.

Additional Retarding
Developed for downhill loaded applications, this option typically delivers an extra gear of retarding capability or 25 percent more speed on downhill grades. Additional retarding is achieved by adding larger brakes and additional brake cooling capability. This option requires the use of Extended Life Wheel Stations.
**Cat Data Link**
Electronically integrates machine computer systems to optimize overall power train performance, increase reliability and component life and reduce operating costs.

**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.

**Directional Shift Management**
Regulates engine speed during directional shifts to prevent damage caused by high speed, directional changes.

**Body-Up Shift Inhibitor**
Prevents the transmission from shifting above the pre-programmed gear without the body fully lowered.

**Overspeed Protection**
The transmission control electronically senses engine conditions and automatically up-shifts one gear to prevent overspeeding. If overspeeding occurs in top gear, the lock-up clutch is disengaged.

**Programmable Top Gear**
Transmission top gear maximum can be set using the Cat ET service tool to help the operator maintain speed limits.

**Downshift Inhibitor**
Prevents engine overspeeding by keeping the transmission from downshifting until engine speed reaches the downshift point.

**Rapid Downshift Function**
Does not allow a turnaround shift until approximately 2.3 seconds after a shift occurs.

**Reverse Speed Inhibitor**
Prevents shifts into reverse when forward ground speeds are in excess of 5 km/h (3 mph).
Caterpillar Braking System
Superior braking control lets operators focus on productivity.

**Integrated Braking System**
The Cat oil-cooled braking system delivers reliable performance and control in extreme haul road conditions. The integrated system combines the service, secondary, parking brakes and retarding functions in the same system for optimum braking efficiency that does not burn fuel while 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-fading braking and retarding performance.

**Brake Design**
Cat oil-cooled disc brakes are designed with large discs and plates for reliable, adjustment-free operation and performance. Brakes are completely enclosed and sealed to prevent contamination and reduce maintenance.

**Long Life**
An oil film prevents direct contact between the discs. This design absorbs the braking forces by shearing the oil molecules and carrying heat away to extend brake life.

**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 (ARC)**
Hydraulically activated, automatic retarder control system electronically controls retarding on grade to maintain optimum engine rpm and brake system performance. ARC is now adjustable in each gear.
Structures
Superior Cat structures are the backbone of the 793F’s durability.

Box Section Design
The 793F 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.

• Steel Structures
Mild steel used throughout frame provides flexibility, durability and resistance to impact loads, even in cold climates and allows for easy field repairs.

• 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.

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

• 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 uneven and rough haul roads rather than transmitting them to the main frame.

Four-bar Link Rear Suspension
The Four-bar Link Suspension directs stress to be more evenly distributed than an A-frame design and allows more service area around the transmission.

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

1. Yellow – Fabrications, Red – Castings
Truck Body Systems
Cat designed and built for rugged performance and reliability.

Cat Truck Bodies
The 793F is offered with three body options: X Body, MSD II (Mine Specific Design) and Gateless Coal Body. These bodies are designed to work with the Cat frame for superior structural performance.

1 – X Body
The X Body is intended for new mine sites and contractor miners. It uses the Caterpillar Mine Specific Design process to create a body that is properly sized and configured to meet the specific requirements of heavy-duty applications. The X Body design offers a larger volume with no weight penalty.

2 – MSD II
The MSD II bodies are intended for established mines and are customized to suit specific mining applications based on a mine site evaluation. The MSD II is the best lightweight body ever built for mining applications and achieves excellent payload performance.

3 – Gateless Coal Body
The Gateless Coal Body is intended for dedicated coal haulage applications. It can be loaded to achieve target payload across the full range of coal densities. The body is designed and built using the MSD II Body concept, ensuring superior durability and reliability.
Monitoring System
Vital machine health and payload data keeps production at peak levels.

VIMS™ 3G Monitoring System
The third generation VIMS™ monitoring system provides critical health and payload data in real-time to keep the 793F performing at top production levels. Sensors throughout the machine enable VIMS to quickly exchange and monitor information from all systems. Users can view up to 10 different machine parameters at a time. Service technicians can quickly download data by connecting directly to the system or through its own web address and generate reports in the office, shop or cab. Data can be used to improve effectiveness of scheduled maintenance programs, maximize component life, improve machine availability and lower operating costs.

Production and Payload Management
Information is available to monitor and enhance truck/loading tool effectiveness, improve fleet productivity and help extend the life of truck frames, tires, rims and power train components, while lowering operating and maintenance cost.

External Payload Indicators
External lights signal loading tool operators when to cease loading for optimum payloads without overloading. Optional payload displays with digital numeric monitor are available.

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

VIMSpC
Off-board software reporting program that allows service personnel to download a complete record of machine health and productivity data. Health and payload reports can be generated for more effective machine management which reduces downtime and lowers operating costs.

Advisor Display
The Advisor display provides real-time machine performance and basic trip, maintenance and diagnostic data. Various machine parameters can be viewed on the display including coolant temperature, oil pressure, current gear selection, current payload and more.

VIMS Supervisor
Optional software allows mine personnel to easily manage and interpret VIMS data for optimum fleet management and productivity.
Operator’s Station
Ergonomically designed for all-day comfort, control and productivity.

**Ergonomic Layout**
The all new F-Series 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.

**Viewing Area**
Designed for excellent all-around visibility and clear sight lines to the haul road, the large viewing area offers exceptional visibility, allowing the operator to maneuver with confidence for high productivity. The right hand platform is clear of any steering or air tanks, allowing the operator an unobstructed view.

Customer Support
Caterpillar has the most experienced dealer network in the world.

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. From the time you select a piece of Cat equipment until the day you trade or sell it, the support you get from your Cat dealer makes the difference.

Dealer Capability
Cat dealers 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
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 through our global dealer network, ready to meet your needs 24/7.

Service Support
Every piece of Cat equipment is designed and built to provide maximum productivity and operating economy throughout its working life. Cat dealers offer a wide range of service plans that will maximize uptime and return on your investment, including:

• Preventive Maintenance Programs
• Diagnostic Programs, such as Scheduled Oil Sampling and Technical Analysis
• Rebuild and Reman Options
• Customer Support Agreements

Application Awareness
Operating and maintenance costs are influenced by many application and site-specific factors, such as: material density, loading position, payload, grades, speeds, haul road design and maintenance. Your Cat dealer can provide you with an understanding of the effects application characteristics and operating techniques have on maintenance and operating costs.

Operation
Your Cat dealer can arrange training programs to help operator’s improve productivity, decrease downtime, reduce operating costs and enhance safety.
Serviceability
Reduced maintenance time results in more productivity.

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

In-Frame Access
Permits easy access to major components for easy servicing and removal.

Ground Level Access
Grouped ground level points allow convenient servicing of tanks, filters, drains, batteries, AutoLube system, pressure taps, screens, fluid sight gauges 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.

Scheduled Oil Sampling
S•O•S™ 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.
Safety

Cat mining machines/systems are designed with safety as the first priority.

**Product Safety**
Caterpillar has been and continues to be the industry leader in proactively developing mining machines that meet or exceed safety standards.

**Integral ROPS Cab**
Resiliently mounted to the main frame to reduce vibration and sound, the integral ROPS structure is an extension of the truck frame and exceeds SAE requirements.

**Access/Egress**
A 600 mm (23.6 in) wide stairway and walkway offer easy access and egress from the ground to the cab.

**Brake Systems**
Four corner oil braking system provides excellent control in slippery conditions. The system assures braking in the event of complete hydraulic failure.

**Steering System**
The steering hydraulic system is separate from the main hydraulic system to prevent cross-contamination and overheating from other sources.

**Overload Policy**
Safety is integral to maintaining the highest productivity in mining operations. The Caterpillar 10/10/20 Overload Policy assures that steering and braking systems have sufficient capacity to perform, even at 20 percent overload.

**Other Safety Features**
- Slip resistant surfaces
- 76 mm (3 in) wide orange three-point operator restraint
- Wide angle mirrors
- Body raised indicator
- Double body retaining cables
- Guard rails
- Reverse neutralizer when dumping
- Low interior sound level

**Isolation Box**
Lockout tagout box mounted on front bumper includes engine shutdown switch, battery lockout, starter lockout and transmission lockout.

SAFETY.CAT.COM™
**Engine**

<table>
<thead>
<tr>
<th>Engine Model</th>
<th>Cat® C175-16</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gross Power</td>
<td>1976 kW 2,650 hp</td>
</tr>
<tr>
<td>– SAE J1995</td>
<td>1848 kW 2,478 hp</td>
</tr>
<tr>
<td>Net Power</td>
<td>20%</td>
</tr>
<tr>
<td>Bore</td>
<td>175 mm 6.9 in</td>
</tr>
<tr>
<td>Stroke</td>
<td>220 mm 8.7 in</td>
</tr>
<tr>
<td>Displacement</td>
<td>85 L 5,187 in³</td>
</tr>
</tbody>
</table>

- Power ratings apply at 1,750 rpm when tested under the specified condition for the specified standard.
- Ratings based on SAE J1995 standard air conditions of 25°C (77°F) and 99 kPa (29.61 Hg) dry 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 3353 m (11,000 ft) altitude.
- Compliant with U.S. Environmental Protection Agency Tier 2 emissions standards.

**Weights – Approximate**

| Chassis Weight | 122 300 kg 270,000 lb |
| Body Weight Range | 26 862-47 627 kg (59,220-105,000 lb) |

- Chassis weight with 100 percent fuel, hoist, body mounting group, rims and 40.00R57 tires.
- Body weight varies depending on how body is equipped.

**Operating Specifications**

| Nominal Payload Capacity | 226.8 tonnes 250 tons |
| Top Speed – Loaded | 60 km/h 37.3 mph |
| Steer Angle | 36 Degrees |
| Turning Diameter – Front | 28 m 93 ft |
| Turning Circle Clearance Diameter | 33 m 107 ft |
| Gross Machine Operating Weight | 386 007 or 390 089 kg (851,000 or 860,000 lb) |

- Refer to Caterpillar Mining Truck 10/10/20 Overload Policy for maximum gross machine weight limitations.

**Final Drives**

| Differential Ratio | 1.8:1 |
| Planetary Ratio | 16:1 |
| Total Reduction Ratio | 28.8:1 |

**Transmission**

| Forward 1 | 12.9 km/h 8 mph |
| Forward 2 | 17.4 km/h 10.8 mph |
| Forward 3 | 23.8 km/h 14.8 mph |
| Forward 4 | 32.1 km/h 19.9 mph |
| Forward 5 | 43.6 km/h 27.1 mph |
| Forward 6 | 60 km/h 37.3 mph |
| Reverse | 11.8 km/h 7.3 mph |

**Suspension**

| Effective Cylinder Stroke – Front | 130.5 mm 5.1 in |
| Effective Cylinder Stroke – Rear | 105.5 mm 4.2 in |
| Rear Axle Oscillation | ±4.9 degrees |

**Body Hoists**

| Pump Flow – High Idle | 846 L/min 224 gal/min |
| Relief Valve Setting – Raise | 20 370 kPa 2,955 psi |
| Body Raise Time – High Idle | 19 Seconds |
| Body Lower Time – Float | 20 Seconds |
| Body Power Down – High Idle | 17.5 Seconds |

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

**Brakes**

| Outside Diameter | 874.5 mm 34.5 in |
| Brake Surface – Front | 89 817 cm² 13,921 in² |
| Brake Surface – Rear | 34 500 cm² 20,847 in² |

**Weight Distributions – Approximate**

| Front Axle – Empty | 48% |
| Rear Axle – Empty | 52% |
| Front Axle – Loaded | 33% |
| Rear Axle – Loaded | 67% |

**Capacity – MSD II – 100% fill factor**

| Struck | 112-146 m³ 142-186 yd³ |
| Heaped (SAE 2:1) | 159-209 m³ 190-250 yd³ |

- Contact your local Caterpillar dealer for body recommendation.
**Service Refill Capacities**

<table>
<thead>
<tr>
<th>Component</th>
<th>Capacity (L)</th>
<th>Capacity (gal)</th>
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<tbody>
<tr>
<td>Fuel Tank</td>
<td>2839</td>
<td>750</td>
</tr>
<tr>
<td>Fuel Tank (optional)</td>
<td>4922</td>
<td>1,300</td>
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<tr>
<td>Cooling System</td>
<td>1074</td>
<td>284</td>
</tr>
<tr>
<td>Crankcase</td>
<td>312</td>
<td>82</td>
</tr>
<tr>
<td>Rear Axle Housing</td>
<td>984</td>
<td>260</td>
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<tr>
<td>Steering System</td>
<td>290</td>
<td>77</td>
</tr>
<tr>
<td>Brake/Hoist System</td>
<td>1315</td>
<td>347</td>
</tr>
<tr>
<td>Torque Converter/Transmission Sump</td>
<td>102</td>
<td>27</td>
</tr>
<tr>
<td>Torque Converter/Transmission System (Includes Sump)</td>
<td>209</td>
<td>55</td>
</tr>
</tbody>
</table>

**Tires**

- 40.00R57
- 46/90R57
- 50/80R57
- Caterpillar recommends the customer evaluate all job conditions and consult the tire manufacturer for proper tire selection.
- Productive capabilities of the 793F are such that, under certain job conditions, TKPH (TMPH) capabilities of standard or optional tires could be exceeded and, therefore, limit production.

**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 ISO 6394 and 6396 is 76 dB(A) for cab offered by Caterpillar, when properly installed and maintained and tested with doors and windows closed.
- 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
## Dimensions

All dimensions are approximate.
Shown with 176 m³ (230 yd³) MSD II Body.

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
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<th>14</th>
<th>15</th>
<th>16</th>
<th>17</th>
</tr>
</thead>
<tbody>
<tr>
<td>Height to Top of ROPS</td>
<td>Overall Length</td>
<td>Wheelbase</td>
<td>Rear Axle to Tail</td>
<td>Ground Clearance</td>
<td>Dump Clearance</td>
<td>Loading Height – Empty</td>
<td>Overall Height – Body Raised</td>
<td>Centerline Front Tire Width</td>
<td>Engine Guard Clearance</td>
<td>Overall Canopy Width</td>
<td>Outside Body Width</td>
<td>Inside Body Width</td>
<td>Front Canopy Height</td>
<td>Rear Axle Clearance</td>
<td>Centerline Rear Dual Tire Width</td>
<td>Overall Tire Width</td>
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<tr>
<td>5597 mm</td>
<td>13 702 mm</td>
<td>5905 mm</td>
<td>4257 mm</td>
<td>990 mm</td>
<td>1301 mm</td>
<td>6533 mm</td>
<td>13 878 mm</td>
<td>5630 mm</td>
<td>1217 mm</td>
<td>8295 mm</td>
<td>7626 mm</td>
<td>6946 mm</td>
<td>6603 mm</td>
<td>1006 mm</td>
<td>4963 mm</td>
<td>7605 mm</td>
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</tbody>
</table>
793F 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
Gross Machine Operating Weight
390 089 kg (860,000 lb)

GROSS WEIGHT

RIMPULL

TOTAL RESISTANCE
(Grade plus Rolling Resistance)

SPEED

1 – 1st Gear
2 – 2nd Gear
3 – 3rd Gear
4 – 4th Gear
5 – 5th Gear
6 – 6th Gear

E – Empty
L – Loaded
* at sea level

Torque Converter Drive
Direct Drive
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 46/90R-57 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**

**Gross Machine Operating Weight**

390 089 kg (860,000 lb)

---

![GROSS WEIGHT](image-url)

**SPEED**

1 – 1st Gear  
2 – 2nd Gear  
3 – 3rd Gear  
4 – 4th Gear  
5 – 5th Gear  
6 – 6th Gear  

---

E – Empty  
L – Loaded  
* at sea level
793F Mining Truck Specifications

793F Standard Retarding – 450 m (1,475 ft)*

GROSS WEIGHT

Typical Field Empty Weight

Gross Machine Operating Weight
390 089 kg (860,000 lb)

1 – 1st Gear
2 – 2nd Gear
3 – 3rd Gear
4 – 4th Gear
5 – 5th Gear
6 – 6th Gear

* at sea level

793F Standard Retarding – 1500 m (4,900 ft)*

GROSS WEIGHT

Typical Field Empty Weight

Gross Machine Operating Weight
390 089 kg (860,000 lb)

1 – 1st Gear
2 – 2nd Gear
3 – 3rd Gear
4 – 4th Gear
5 – 5th Gear
6 – 6th Gear

* at sea level
793F Additional Retarding – Continuous*

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/t) 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 46/90R-57 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**

**Gross Machine Operating Weight**

390,089 kg (860,000 lb)

---

![Diagram showing GROSS WEIGHT, EFFECTIVE GRADE, and SPEED relationships for different gears.]

1 – 1st Gear  
2 – 2nd Gear  
3 – 3rd Gear  
4 – 4th Gear  
5 – 5th Gear  
6 – 6th Gear  

E – Empty  
L – Loaded  
* at sea level
793F Mining Truck Specifications

793F Additional Retarding – 450 m (1,475 ft)*

GROSS WEIGHT

Typical Field Empty Weight

Gross Machine Operating Weight
390 089 kg (860,000 lb)

1 – 1st Gear
2 – 2nd Gear
3 – 3rd Gear
4 – 4th Gear
5 – 5th Gear
6 – 6th Gear

* at sea level

793F Additional Retarding – 1500 m (4,900 ft)*

GROSS WEIGHT

Typical Field Empty Weight

Gross Machine Operating Weight
390 089 kg (860,000 lb)

1 – 1st Gear
2 – 2nd Gear
3 – 3rd Gear
4 – 4th Gear
5 – 5th Gear
6 – 6th Gear

* at sea level
Standard equipment may vary. Consult your Cat dealer for details.

**ELECTRICAL**
- Alarm, Back-up
- Brushless Alternator, 150 ampere
- Batteries, 93-amp hour, low maintenance, 12-volt (2)
- Converter, 12-volt electrical
- Electrical System, 24-volt, 10, 15 and 20 amp
- Battery Charge Receptacle

**Lighting System**
- Back-up and Hazard Lights
- Directional Signals (front and rear LED)
- Front Stair Access/Service Deck
- Stop/Tail Lights (LED)
- Engine Compartment
- VIMS, Blue Light (LED)

**Power System**
- Rear Axle Continuous Lubrication/Filtration

**OPERATOR ENVIRONMENT**
- Air Conditioner with Automatic Climate Control
- 12-volt DC Power Supply (3)
- Coat Hook
- Cup Holder
- Diagnostic Connection Port
- Dome Courtesy Light
- Entertainment Radio Ready
- 5 amp Converter, Speakers and Wiring Harness
- Gauge/Indicators
- Gauge Panel:
  - Transmission Fluid Temperature
  - Brake Oil Temperature
  - Engine Coolant Temperature
  - Fuel Level
  - Torque Converter Oil Temperature
  - Electric Engine Control Fault Indicator
  - Electric Hour Meter
  - Speedometer
  - Tachometer
- Heater/Defroster, 11 070 kCal (45,930 Btu)
- Hoist, Body Control (electric)
- Horn
- Mirrors, Right and Left
- ROPS Cab, Insulated/Sound Suppressed Seat, Operator, Air Suspension
- Seatbelt, Operator, Three Points, Retractable
- Seatbelt, Trainer, Two Points, Retractable
- Stairway and Walkway Access, 600 mm (23.6 in)
- Steering Wheel, Tilt, Padded, Telescopic Storage Compartments
- Tinted Glass
- Transmission Gear Indicator
- VIMS Message Center with Advisor Window, Operator, Electric Powered
- Windshield, Wiper Intermittent Control and Washer

**POWER TRAIN**
- Cat® C175-16 Tier 2 Emissions Compliant Engine
- Air Cleaner with Pre-cleaner (4)
- Air-to-Air Aftercooler (ATAAC)
- Automatic Starter Protection
- Ether Starting Aid (automatic)
- Multi-Point Oil Pressure Sensing Turbocharging (4)/Aftercooled Braking System
- Automatic Retarder Control, Adjustable Brake Release Motor (towing)
- Engine Overspeed Protection
- Extended Life Brake Disc Material Oil-cooled, Multi-disc (front and rear)
- Service, Retarding, Parking, Secondary Park Brake Integrated with Gear Selector Secondary, Emergency Transmission
- 6-speed, Automatic Powershift with Electronic Control (ECPC)
- Body-up Reverse Neutralizer
- Body-up Shift Inhibitor
- Controlled Throttle Shifting
- Directional Shift Management
- Downshift/Reverse Shift Inhibitor
- Individual Clutch Modulation
- Lock-up Torque Converter
- Neutral Coast Inhibitor
- Neutral Start Switch
- Programmable Top Speed

**OTHER STANDARD EQUIPMENT**
- Automatic Lubrication System
- Aux “Buddy” Dumping Quick Connect
- Aux Steering Quick Connect (towing)
- Driveline Guard
- Fast Fill Fuel System
- Fuel Filter with Water Separator
- Ground Level Battery Lockout
- Ground Level Engine Shut-down
- Ground Level Engine Start Lockout
- Ground Level Transmission Lockout
- Ground Level VIMS Data Port
- Hi-speed Crankcase Oil Change
- Hydraulic Filters, 1,000 hour Reservoirs (3 separate)
- Brake/Hoist, Steering/Fan, Transmission/Converter
- Rock Ejectors
- Service Points, Ground Level
- Sight Level Gauges for Hydraulic/Engine Oil
- S•O•S Sample Ports
- Supplemental Steering (automatic)
- Tie Down Eyes
- Tow Hooks (front)/Tow Pin (rear)
- Traction Control System
- Vandalism Protection Locks
- Vital Information Management System (VIMS)
  - Includes VIMS Payload Monitor with MAX Payload and Speed Manager
  - (Recommend using download cable 127-9797 and PC based software JERD2175. Supplemental software “VIMS Supervisor” YERA1403. Order separately. Computer not provided.)

**ANTIFREEZE**
- Extended Life Coolant to –35° C (–30° F)
Optional equipment may vary. Consult your Cat dealer for details.

Additional Lighting
Additional Retarding for Downhill Hauls
Body Heat
Cat Comfort Air Suspension Trainer Seat
Antifreeze/Coolant Protects to –50°C (–58°F)
Brake Wear Indicator Gauge
Cabin Air Precleaner
Center Tow Bumper Attachment
Electric Powered Window, Right Side
Electric Starting System

Engine Coolant and Oil Heater for Cold Weather Starts
Engine Delay Shutdown Timer
Extended Life Wheel Stations
External Digital Payload Display
External Heated Mirrors
Fast Fill Service Center
Fuel Tank (4920 L/1,300 gal)
Cat Comfort Heated Operator Seat
High Intensity Discharge (HID) Lighting (front and rear)
Hub Odometer (km and miles)

Portable Fire Extinguisher
Rear Axle Lubrication Cooler
Retractable Front Sun Visor
Rim Guard
Rims (813 mm/32 in)
Road Analysis Control (RAC)
SL-V Grease Injectors
Throttle Lock
Walkway and Handrail for Rear Cab Access
Wheel Chocks
Work Area Vision System (WAVS)
793F Mining Truck

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