



# 793

## Mining Truck

# Technical Specifications

Configurations and features may vary by region. Please consult your Cat® dealer for availability in your area.

### Table of Contents

<b>Specifications</b> .....	<b>2</b>
Engine .....	2
Weights – Approximate .....	2
Weight Distributions – Approximate .....	2
Final Drives .....	2
Transmission .....	2
Tires and Rims .....	2
Braking System .....	2
Capacity – HP Body – 100% fill factor .....	3
Body Hoists .....	3
Suspension .....	3
Service Refill Capacities .....	3
Cab .....	3
Steering .....	3
Dimensions .....	4
793 Gradeability/Speed/Rimpull .....	5
793 Standard Retarding – Continuous .....	6
793 Standard Retarding – 450 m (1,475 ft) .....	7
793 Standard Retarding – 1500 m (4,900 ft) .....	7
793 Additional Retarding – Continuous .....	8
793 Additional Retarding – 450 m (1,475 ft) .....	9
793 Additional Retarding – 1500 m (4,900 ft) .....	9
<b>Standard and Optional Equipment</b> .....	<b>10</b>

# 793 Mining Truck Specifications

## Engine

Engine Model	Cat® C175-16	
Gross Power – SAE J1995:2014	1976 kW	2,650 hp
Net Power – SAE J1349:2011	1886 kW	2,529 hp
Rated Speed	1,750 rpm	
Emissions Rating	Fuel Optimized	
Bore	175 mm	6.9 in
Stroke	220 mm	8.7 in
Displacement	85 L	5,187 in <sup>3</sup>

- Net Power advertised is the power available at the flywheel when the engine is equipped with air intake system, exhaust system, and alternator
- U.S. EPA Tier 4 Final/EU Stage V available for applicable markets

## Weights – Approximate

Rated Gross Machine Weight (RGMW)		
Standard Wheel Stations	386 008 kg	851,000 lb
Extended Life Wheel Stations	404 000 kg	890,668 lb
Chassis Weight (CW)		
Standard Wheel Stations	126 410 kg	278,863 lb
Extended Life Wheel Stations	133 854 kg	295,098 lb
Body Weight (BW)	30 151 kg	66,471 lb
Nominal Rated Payload (NRP)		
Standard Wheel Stations	229 tonnes	252 tons
Extended Life Wheel Stations	240 tonnes	265 tons

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

## Weight Distributions – Approximate

Front Axle – Empty	51%
Rear Axle – Empty	49%
Front Axle – Loaded	33%
Rear Axle – Loaded	67%

- Weight distributions optimized with Cat body

## Final Drives

Double reduction, planetary with full floating axles.	
Differential Ratio	1.8:1
Planetary Ratio	16:1
Total Reduction Ratio	28.8

## Transmission

Forward 1	12.1 km/h	7.5 mph
Forward 2	16.4 km/h	10.2 mph
Forward 3	22.4 km/h	13.9 mph
Forward 4	30.3 km/h	18.8 mph
Forward 5	41.0 km/h	25.5 mph
Forward 6	59.9 km/h	37 mph
Reverse	11.2 km/h	7 mph
Top Speed – Loaded	59.9 km/h	37 mph

## Tires and Rims

40.00 R57
46/90 R57
50/80 R57

737 mm (29 in) Standard rims, 813 mm (32 in) Optional rims

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

## Braking System

Service Brakes: Four-Corner, Wet Disc, Oil Cooled, Hydraulically Actuated		
Front Wet Disc Brake Surface Area	89 727 cm <sup>2</sup>	13,907 in <sup>2</sup>
Rear Wet Disc Brake Surface Area	134 590 cm <sup>2</sup>	20,861 in <sup>2</sup>
Standards (Service and Secondary)	ISO 3450:2011	

Parking Brake: Four-corner, Multi-disk, Spring applied, Hydraulically Released

## Capacity – HP Body – 100% fill factor

Struck	112.6-151 m <sup>3</sup>	147-197.5 yd <sup>3</sup>
Heaped (SAE 2:1)	162-190 m <sup>3</sup>	212-249 yd <sup>3</sup>

• Consult your local Cat dealer for body recommendations

## Body Hoists

Twin, two-stage hydraulic cylinders with snubbing valve		
Pump Flow – High Idle	819 L/min	216 gal/min
Relief Valve Setting – Raise	20 370 kPa	2,955 psi
Body Raise Time – High Idle	22 Seconds	
Body Lower Time – Float	23 Seconds	
Body Power Down – High Idle	20.7 Seconds	

## Suspension

Self-contained nitrogen/oil cylinders, pin-to-pin mounting, top and bottom double shear clevis attachments

Effective Cylinder Stroke – Front	317 mm	12.48 in
Effective Cylinder Stroke – Rear	165 mm	6.50 in
Rear Axle Oscillation	± 4.9 degrees	

## Service Refill Capacities

Fuel Tank	2839 L	750 gal
Fuel Tank (Optional)	4922 L	1,300 gal
Diesel Exhaust Fluid (DEF) Tank	235 L	62 gal
Cooling System	1074 L	284 gal
Crankcase	312 L	82 gal
Front Wheels, Each	30 L	8 gal
Differential and Final Drives	984 L	260 gal
Steering System (Includes Tank)	290 L	77 gal
Brake/Hoist System (Includes Tank)	1315 L	347 gal
Torque Converter Sump	102 L	27 gal
Torque Converter/Transmission System (Includes Sump)	209 L	55 gal

## Cab

Air Conditioning (HFC – 134A refrigerant)	9.3 kW	31 733 BTU/hr
Heater/Defroster	10.7 kW	36,510 BTU/hr

- Ambient capabilities down to –30° C (–22° F) for heater/defroster and up to 50° C (122° F) for air conditioning
- The operator sound pressure level, 74 dB(A), complies with ISO 6394 and ISO 6396
- ROPS (Rollover Protective Structure) meets ISO 3471:2008 for Operator and ISO 13459:2012 for Trainer
- FOPS (Falling Objects Protective Structure) meets ISO 3449:2005 Level II for Operator and ISO 13459:2012 Level II for Trainer

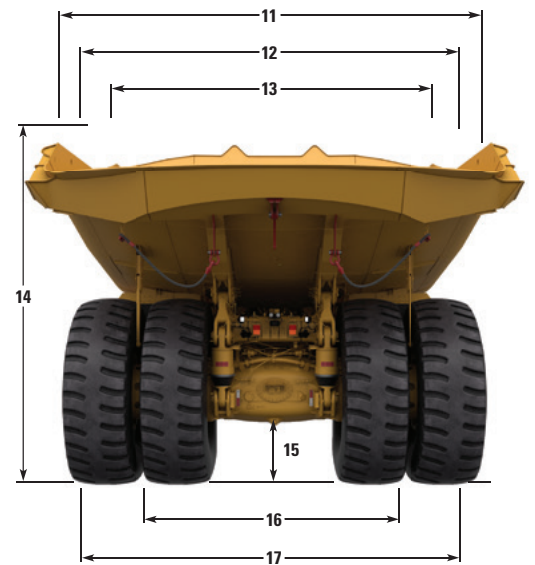
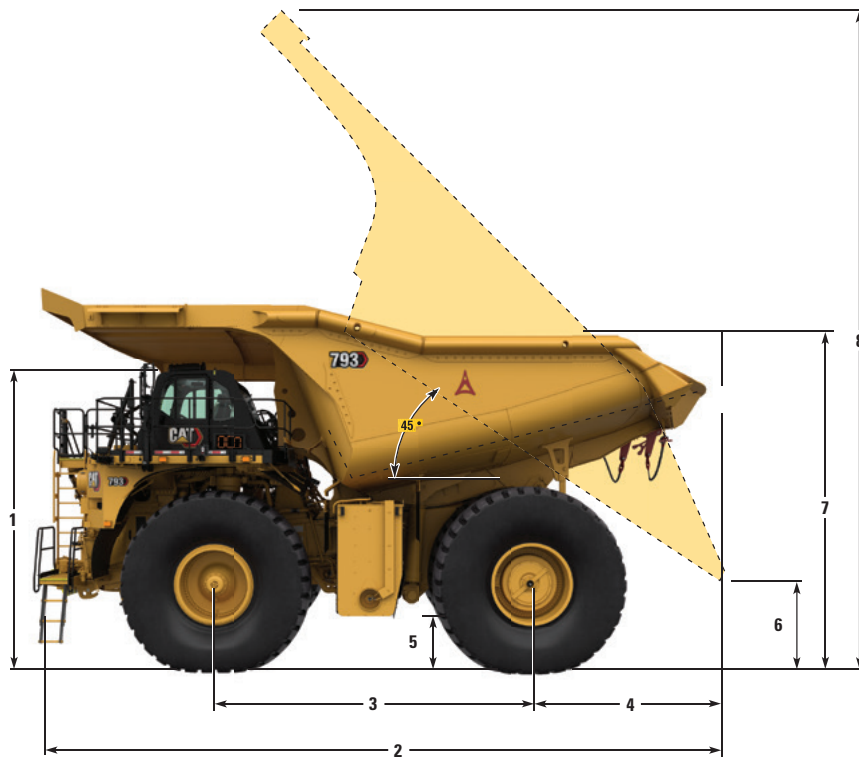
## Steering

Steer Angle	36 degrees	
Turning Diameter (ISO 7457:1997)	28 m	93 ft
Steering Standards	ISO 5010:2019	

# 793 Mining Truck Specifications

## Dimensions

All dimensions are approximate. Shown with 176 m<sup>3</sup> (230 yd<sup>3</sup>) MSD II Body.



1 Height to Top of ROPS	5712 mm	18 ft 9 in
2 Overall Length	13 360 mm	44 ft 10 in
3 Wheelbase	5905 mm	19 ft 5 in
4 Rear Axle to Tail	3997 mm	13 ft 2 in
5 Ground Clearance	1041 mm	3 ft 5 in
6 Dump Clearance	1301 mm	5 ft 4 in
7 Loading Height – Empty	6181 mm	20 ft 4 in
8 Overall Height – Body Raised	13 710 mm	45 ft
9 Centerline Front Tire Width	5609 mm	18 ft 5 in
10 Engine Guard Clearance	1325 mm	4 ft 4 in
11 Overall Canopy Width	8563 mm	28 ft 1 in
12 Outside Body Width	7942 mm	26 ft 1 in
13 Inside Body Width	7334 mm	24 ft 1 in
14 Front Canopy Height	7074 mm	23 ft 3 in
15 Rear Axle Clearance	1130 mm	3 ft 9 in
16 Centerline Rear Dual Tire Width	4963 mm	16 ft 3 in
17 Overall Tire Width	7605 mm	24 ft 11 in

# 793 Mining Truck Specifications

## 793 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. Chart utilizes extended life wheel stations and 50/80R57 tires.

### Typical Field Empty Weight

Gross Machine Operating Weight  
404 000 kg (890,669 lb)

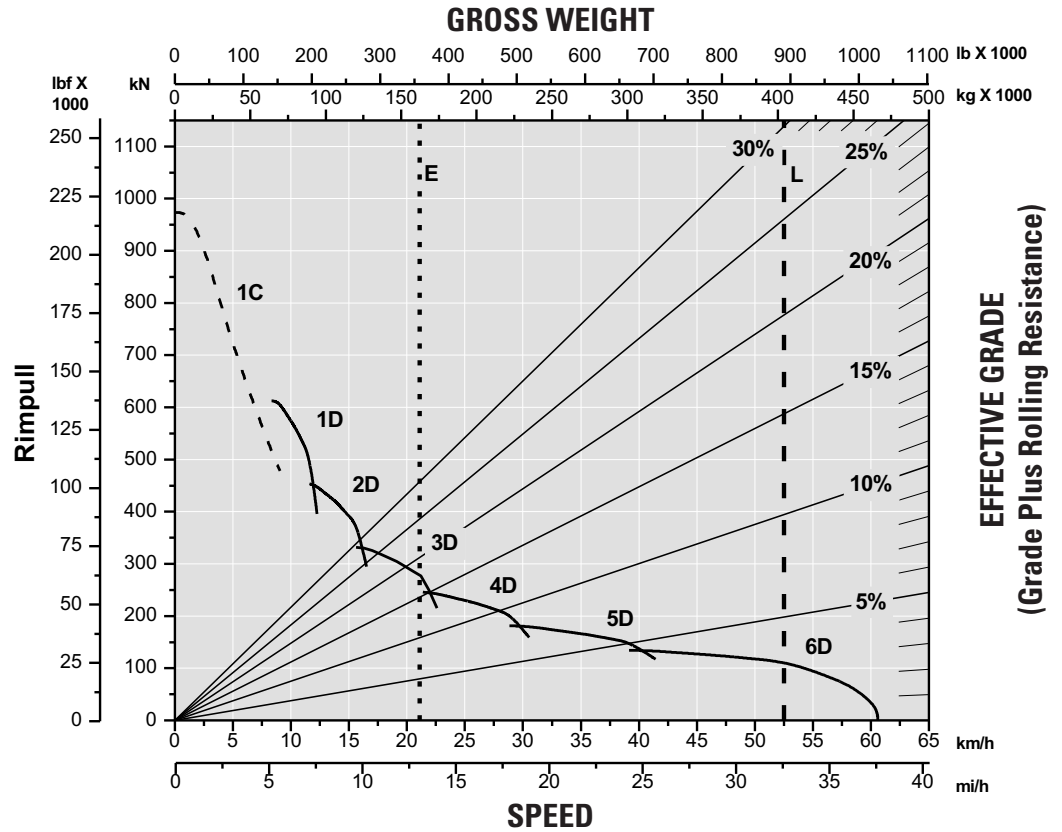
- 1 – 1st Gear
- 2 – 2nd Gear
- 3 – 3rd Gear
- 4 – 4th Gear
- 5 – 5th Gear
- 6 – 6th Gear

E – Empty  
L – Loaded

\* at sea level

Torque Converter Drive

Direct Drive



# 793 Mining Truck Specifications

## 793 Standard 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/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 extended life wheel stations and 50/80R57 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.

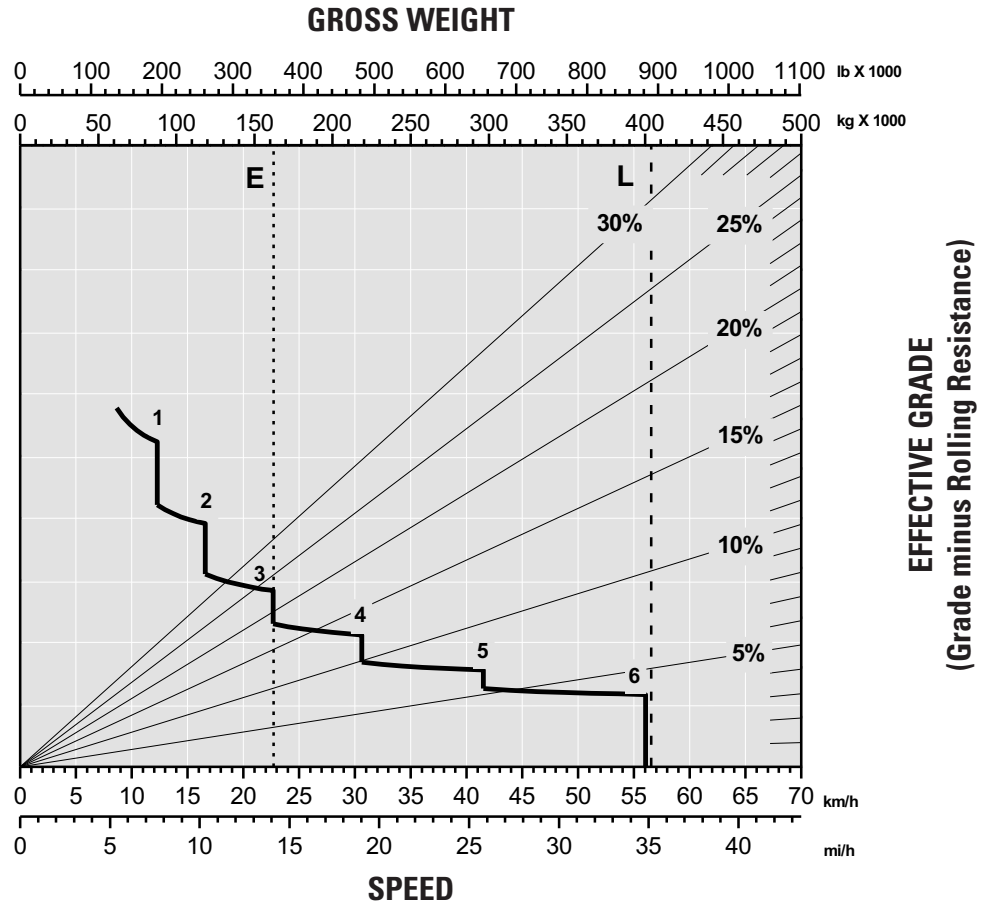
-----  
Typical Field Empty Weight

.....  
Gross Machine Operating Weight  
404 000 kg (890,669 lb)

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

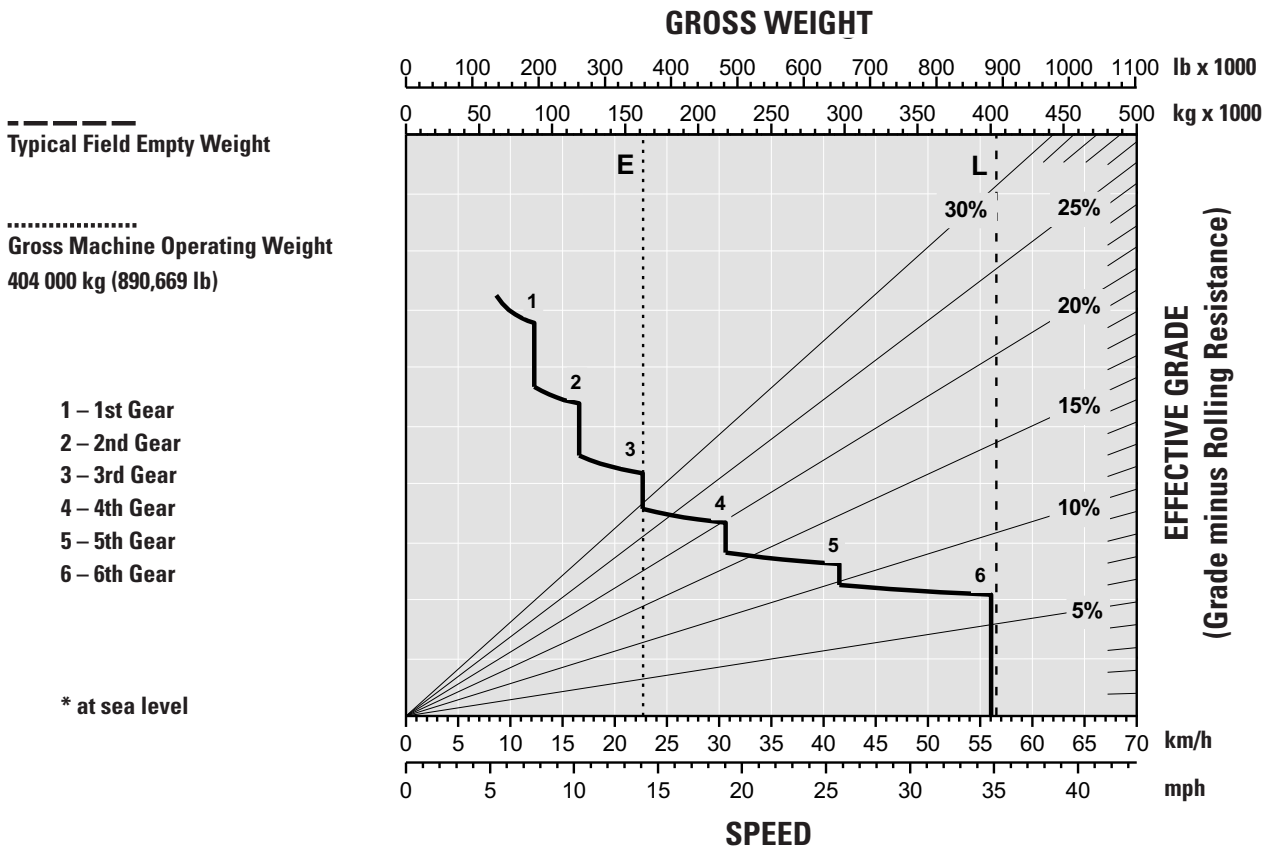
E – Empty  
L – Loaded

\* at sea level

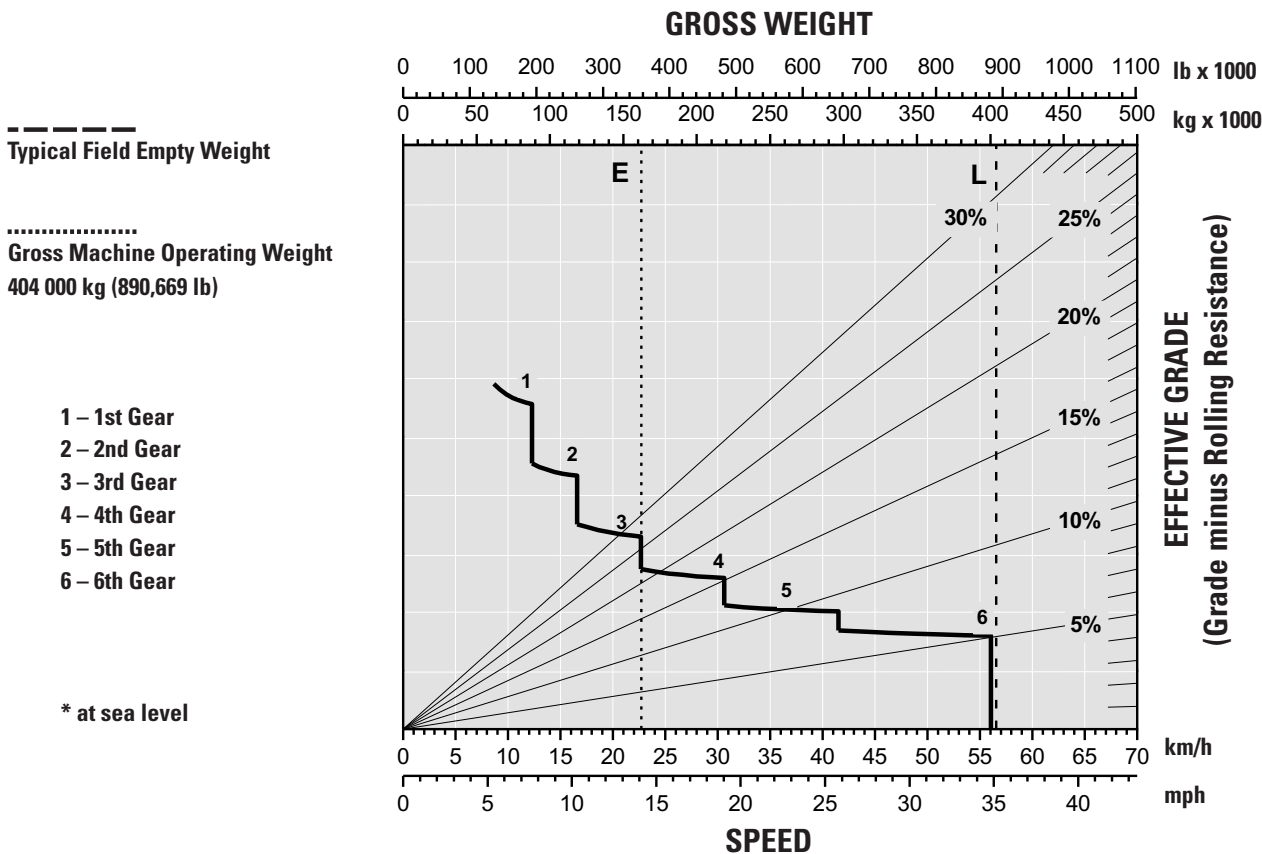


# 793 Mining Truck Specifications

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



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



# 793 Mining Truck Specifications

## 793 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/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 extended life wheel stations and 50/80R57 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.

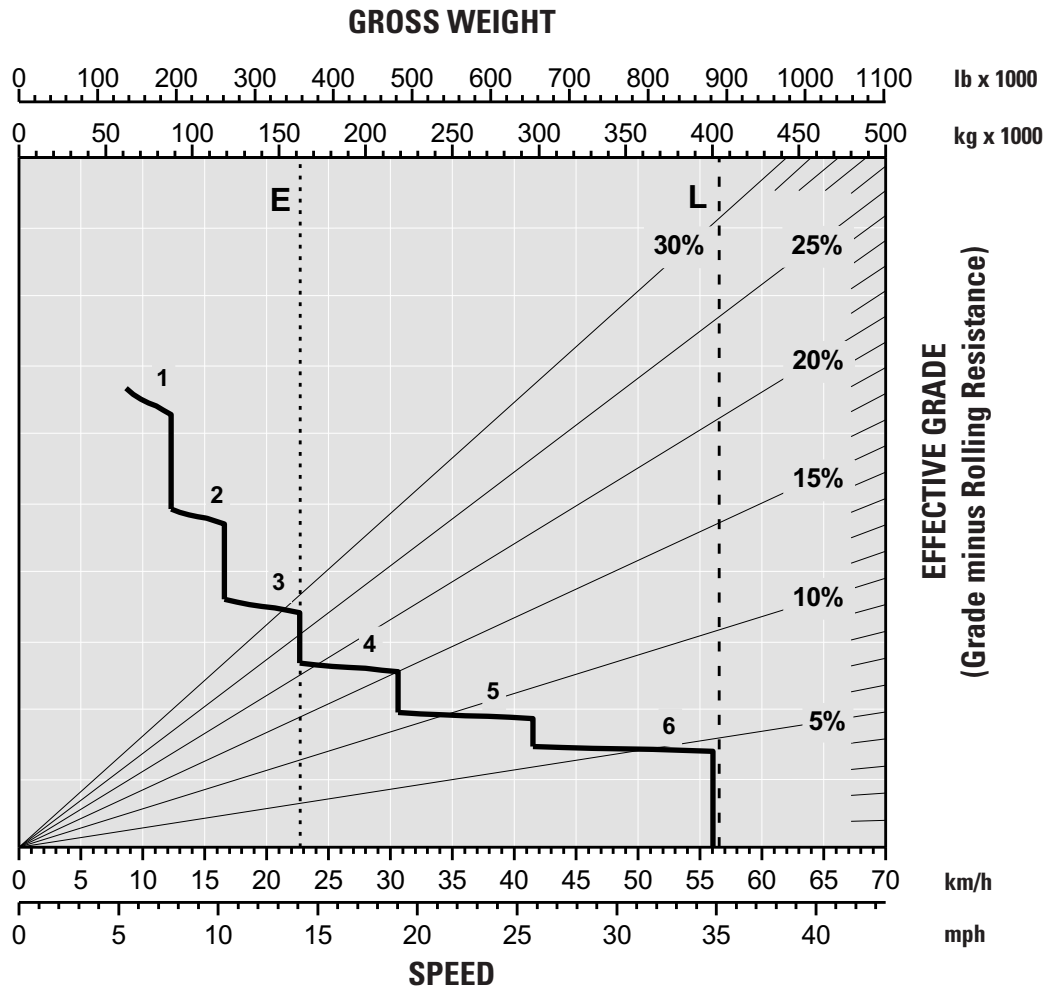
### Typical Field Empty Weight

Gross Machine Operating Weight  
404 000 kg (890,669 lb)

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

E – Empty  
L – Loaded

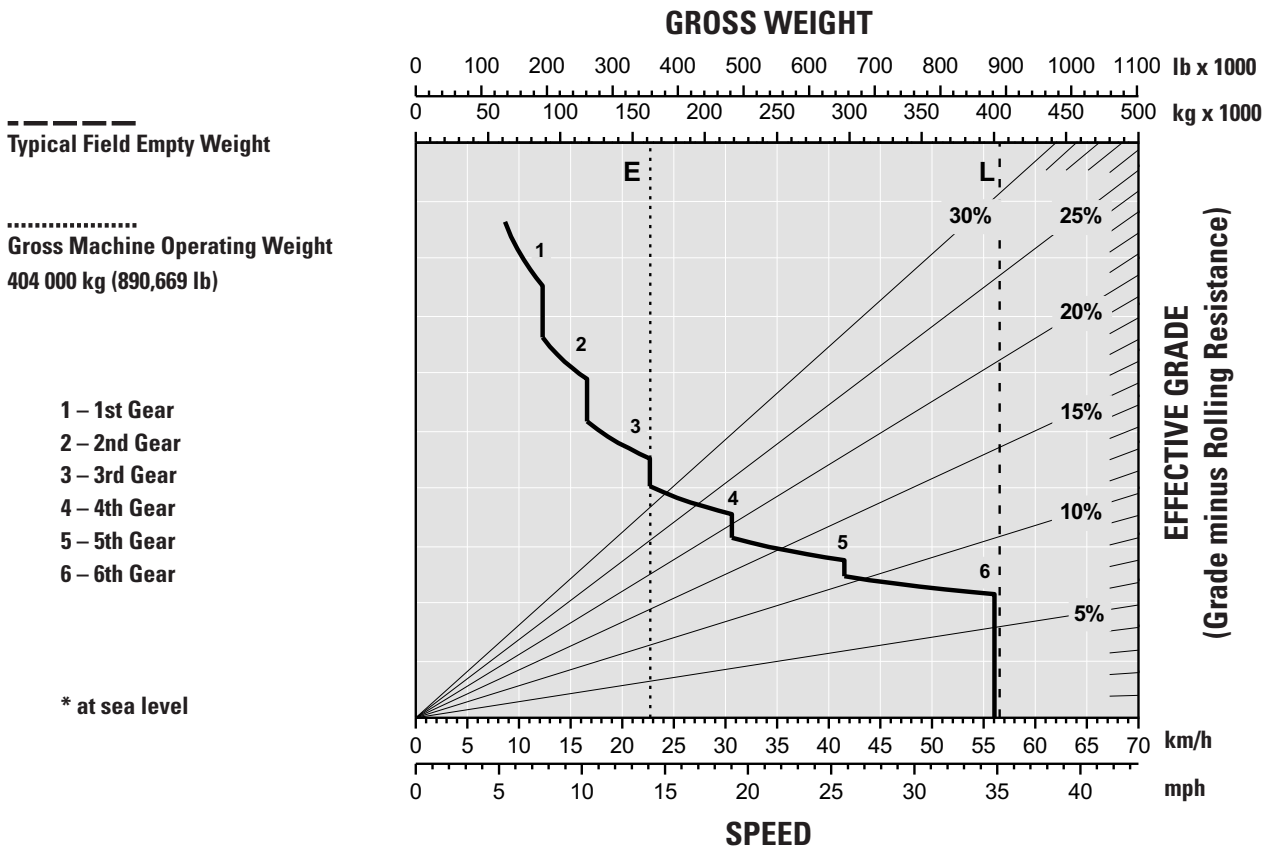
\* at sea level



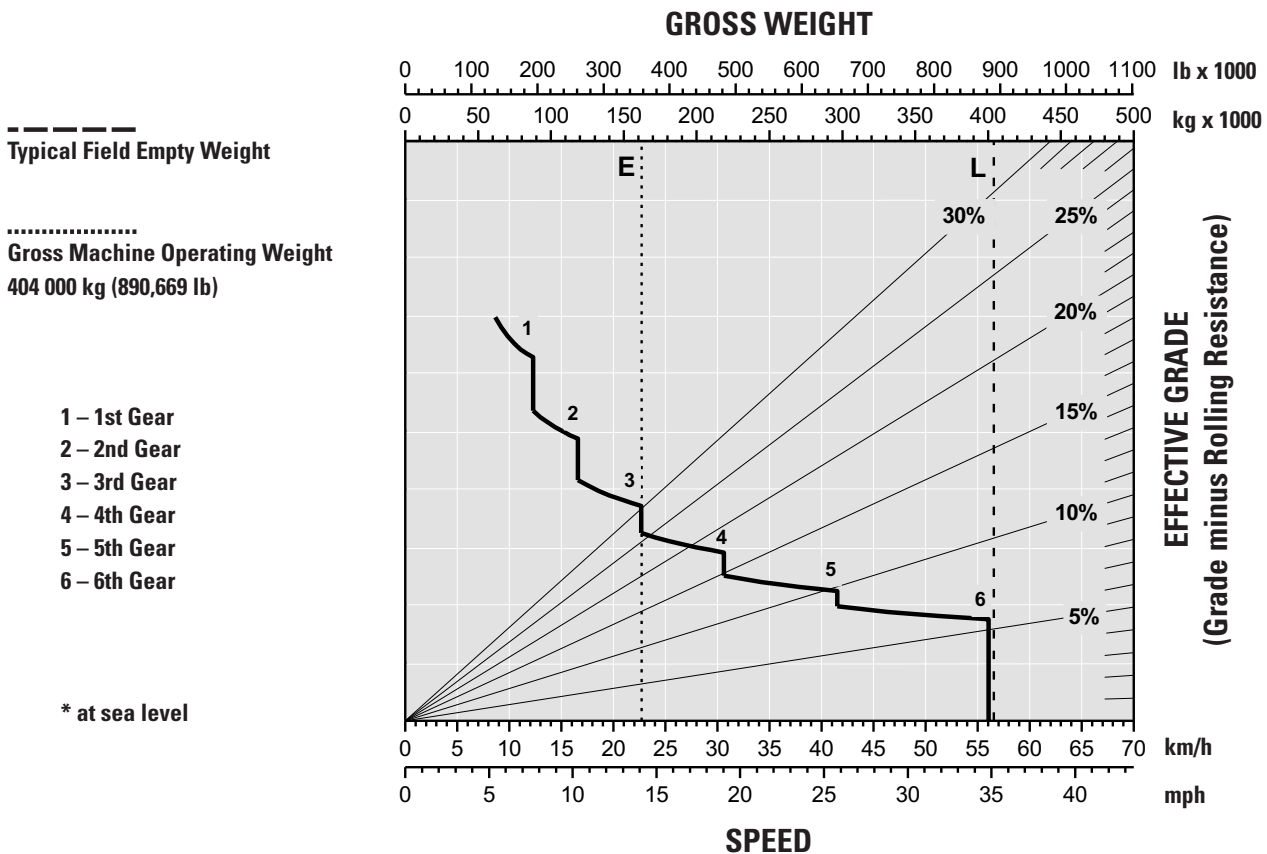


# 793 Mining Truck Specifications

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



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



# 793 Mining Truck Specifications

## Standard and Optional Equipment

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

	Standard	Optional		Standard	Optional
<b>ELECTRICAL</b>			Camera, 360 Surround View		✓
Alarm, Back-up	✓		Operator Coaching		✓
Brushless Alternator, 260 ampere	✓		AutoHoist		✓
Batteries, 210-amp hour, low maintenance, 12-volt (4)	✓		Cup Holder	✓	
Converter, 12-volt electrical	✓		Diagnostic Connection and Service Port	✓	
Electrical System, 24-volt	✓		Driver Safety System Mounting		✓
Emergency Engine Shutdown at front bumper and in-cab	✓		Dome Courtesy Light and Map Lights	✓	
Jump start Receptacle		✓	Electric Powered Window, Right Side		✓
<b>Lighting System LED:</b>			Interface, Third Party		✓
• Back-up and Hazard Lights	✓		Entertainment radio ready: -Speakers	✓	
• Directional Signals (front and rear)	✓		-Radio mounting provisions and 12V power supply and Wiring Harness		
• Front Stair Access/Service Deck	✓		Fire suppression ready	✓	
• Stop/Tail Lights	✓		Floor mat, multi-piece and replaceable	✓	
• Engine Compartment	✓		Delayed engine shutdown	✓	
• VIMSTM, Blue Light	✓		<b>Gauge/Indicators</b>		
• Headlights, and fog lights	✓		Engine system, brake and transmission fault indicators	✓	
• Brake and retarder light status ready	✓		Electric Hour Meter	✓	
Additional Lighting		✓	Speedometer	✓	
<b>CAT TECHNOLOGY PRODUCTS</b>			Tachometer	✓	
Integrated Object Detection System	✓		<b>Interactive touchscreen vehicle information display:</b>		
Product Link Elite	✓		• Day/night mode	✓	
Remote Flash	✓		• Action alarm	✓	
Remote Troubleshoot	✓		• Quad gauge display	✓	
TPMS2 Payload Monitoring	✓		<b>Gauge Panel:</b>		
Electronic Operation and Maintenance	✓		• Transmission Fluid Temperature	✓	
Manual	✓		• Brake Oil Temperature	✓	
Cyber Security	✓		• Critical oil and Coolant Temperature	✓	
Road Analysis Control (RAC)	✓		• Fuel Level (and DEF, if applicable)	✓	
Command-Ready Option		✓	• Engine system, brake and transmission fault indicators	✓	
Vital Information Management System (VIMS)	✓		• Operator selectable max. machine speed by rotary dial	✓	
<b>OPERATOR ENVIRONMENT</b>			Heater/Defroster	✓	
Modular hydraulic powered HVAC with automatic temperature control	✓		Hoist, Body Control (electric)	✓	
Accessory mounting provisions	✓		Horn	✓	
12V auxiliary power connection	✓		Horn for use in workshop		✓
5V USB charging port	✓		Heated Mirrors, Right and Left	✓	
Brake Wear Indicator Gauge		✓	Mirrors Deluxe		✓
Cabin Filtration System		✓	Mirrors, Heated, Wide Body		✓
Cat Next Gen Air Suspension Trainer Seat		✓	Retractable Front Sun Visor		✓
Cat Next Gen Heated Operator Seat		✓	ROPS Cab, Insulated/Sound Suppressed	✓	
Coat Hook	✓		Seat, Operator, Air Suspension and Ventilation	✓	
Cruise Control		✓			

## Standard and Optional Equipment (continued)

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

	Standard	Optional
Seatbelt, Operator, Three Points, Retractable	✓	
Seatbelt, Trainer, Two Points, Retractable	✓	
Stairway and Walkway Access, 600 mm (24 in)	✓	
Steering Wheel, Tilt, Padded, Telescopic	✓	
Storage locations for operator gear	✓	
Tinted Glass	✓	
Tire shield, air deflector		✓
Transmission Gear Indicator	✓	
VIMS Message Center with Advisor	✓	
Window, Operator, Electric Powered	✓	
Windshield, Wiper Intermittent Control and Washer	✓	
Self-filling to windshield washer fluid from AC condensate	✓	
<b>POWER TRAIN</b>		
<b>Cat C175-16 Diesel Engine:</b>		
• Air Cleaner with Precleaner (4)	✓	
• Air-to-Air Aftercooler (ATAAC)	✓	
• Automatic Starter Protection	✓	
• Multi-Point Oil Pressure Sensing	✓	
• Turbocharging (4)/Aftercooled	✓	
• Self cleaning oil filter	✓	
• Centrifugal oil filter	✓	
<b>Braking system:</b>		
• 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, spring applied with pressure release	✓	
• Anti-lock Braking System (ABS) and Dynamic Stability Control (DSC)		✓
<b>TRANSMISSION</b>		
6-speed, Automatic Powershift with APECS controls	✓	
Body-up Reverse Neutralizer	✓	
Body-up Shift Inhibitor	✓	
Controlled Throttle Shifting		
Directional Shift Management	✓	
Downshift/Reverse Shift Inhibitor	✓	
Lock-up Torque Converter	✓	
Neutral Coast Inhibitor	✓	

	Standard	Optional
Neutral Start Switch	✓	
Programmable Top Speed	✓	
Pre-lubrication/Engine	✓	
High altitude torque converter		✓
Rear Axle Continuous Lubrication/Filtration	✓	
Additional Retarding for Downhill Hauls		✓

### COOLING

Extended Life Coolant to –35° C (–30° F)	✓	
Mesabi flexible core radiator	✓	
Antifreeze/coolant protects to –50° C (–58° F)		✓

### OTHER EQUIPMENT

Automatic Lubrication System, auto shutoff	✓	
Aux "Buddy" Dumping Quick Connect	✓	
Aux Steering Quick Connect (towing)	✓	
Battery box, rubber lined	✓	
Body Heat		✓
Center Tow Bumper Attachment		✓
Driveline Guard	✓	
Hub Odometer (km and miles)		✓
Electric Starting System	✓	
Air Starting System		✓
Engine Coolant and Oil Heater for Cold Weather Starts		✓
Engine Delay Shutdown Timer	✓	
Extended Life Wheel Stations		✓
External Digital Payload Display		✓
Fast Fill Service Center		✓
Fast Fill Fuel System	✓	
Fuel Filter with Water Separator	✓	
Fuel Tank (4920 L/1,300 gal)		✓
Ground Level Battery Lockout	✓	
Ground Level Engine Shut-down	✓	
Ground Level Engine Start Lockout	✓	
Ground Level lockouts for transmission, battery and engine	✓	
Ground Level VIMS Data Port	✓	
Hi-speed Crankcase Oil Change	✓	
Hydraulic Filters, 1,000 hour	✓	
Tank Mud Guards		✓
Payload digital display		✓
Portable Fire Extinguisher and mounting		✓
Rim Guard		✓
Rims (813 mm/32 in)		✓

# 793 Mining Truck Specifications

## Standard and Optional Equipment *(continued)*

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

	Standard	Optional
<b>OTHER EQUIPMENT</b>		
Reservoirs (3 separate): Brake/Hoist, Steering/Fan, Transmission/Converter	✓	
Reflectors		✓
Rock Ejectors	✓	
Service Points, Ground Level	✓	
Sight Level Gauges for Hydraulic / Engine Oil/Torque Converter/Differential	✓	
S•O•S <sup>SM</sup> Sample Ports	✓	
Supplemental Steering (automatic)	✓	
Tie Down Eyes	✓	
SL-V Grease Injectors	✓	
Tow Hooks (front)/Tow Pin (rear)	✓	
Traction Control System	✓	
Vandalism Protection Locks	✓	
Primary access anti-slip high visibility demarcations	✓	
Walkway and Handrail for Rear Cab Access		✓
Wheel Chocks		✓

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

© 2022 Caterpillar  
All rights reserved

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

CAT, CATERPILLAR, LET'S DO THE WORK, their respective logos, "Caterpillar Corporate Yellow," the "Power Edge" and Cat "Modern Hex" trade dress as well as corporate and product identity used herein, are trademarks of Caterpillar and may not be used without permission.

AEHQ6640-02 (10-2022)  
Replaces AEHQ6640-01  
Build Number: 08A  
(Global excluding China)

