



# Cat<sup>®</sup> 793D

## Mining Truck

# Technical Specifications

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

## Table of Contents

<b>Specifications</b> .....	<b>2</b>
Engine .....	2
Weights – Approximate .....	2
Weights Distributions – Approximate .....	2
Final Drives .....	2
Transmission .....	2
Tires & Rims .....	2
Braking System .....	2
Standard Body – High Performance (HP) .....	3
Body Hoists .....	3
Suspension .....	3
Service Refill Capacities .....	3
Cab .....	3
Steering .....	3
Dimensions .....	4
Gradeability/Speed/Rimpull .....	5
Standard Resistive Braking (Retarding) – Continuous .....	6
Standard Resistive Braking – 450 m (1,475 ft) .....	7
Standard Resistive Braking – 600 m (1,968 ft) .....	7
Standard Resistive Braking – 900 m (2,953 ft) .....	8
Standard Resistive Braking – 1500 m (4,900 ft) .....	8
Additional Resistive Braking (Retarding) – Continuous .....	9
Additional Resistive Braking – 450 m (1,475 ft) .....	10
Additional Resistive Braking – 600 m (1,968 ft) .....	10
Additional Resistive Braking – 900 m (2,953 ft) .....	11
Additional Resistive Braking – 1500 m (4,900 ft) .....	11
<b>Standard and Optional Equipment</b> .....	<b>12</b>

# 793D Mining Truck Specifications

## Engine

Engine Model	Cat® 3516E	
Gross Power – SAE J1995	1801 kW	2,415 hp
Net Power – SAE J1349	1694 kW	2,272 hp
Rated Speed	1,750 rpm	
Emissions Rating	U.S. EPA Tier 1 Equivalent	
Bore	170 mm	6.7 in
Stroke	215 mm	8.5 in
Displacement	78 L	4,760 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.
- 3516E DGB Ready Engine is optional. Engine performance matches standard diesel version.

## Weights – Approximate

Rated Gross Machine Weight (RGMW)		
Tire size 40R57	383 848 kg	846,240 lb
Chassis Weight (CW)	120 563 kg	265,796 lb
Body Weight (BW)	31 100 kg	68,564 lb
Nominal Rated Payload (NRP)		
Tire size 40R57	232 tonnes	256 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.

## Weights Distributions – Approximate

Front Axle – Empty	50%
Rear Axle – Empty	50%
Front Axle – Loaded	33%
Rear Axle – Loaded Idle	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	28.8:1

## Transmission

Forward 1	11.7 km/h	7.2 mph
Forward 2	15.7 km/h	9.8 mph
Forward 3	21.5 km/h	13.4 mph
Forward 4	29.1 km/h	18.1 mph
Forward 5	39.4 km/h	24.5 mph
Forward 6	54.3 km/h	33.7 mph
Reverse	10.9 km/h	6.8 mph
Top Speed – Loaded	54.3 km/h	33.7 mph

## Tires & Rims

40.00R57 (standard)  
46/90R57 (optional)  
29" x 57" Rims

- Quick Change Rims (QCR) optional
- Extended Life Wheel Station (XLWS) optional
- Caterpillar recommends the customer evaluate all job conditions and consult tire manufacturer for proper tire selection and Tonne Kilometres Per Hour (TKPH) Ton-Miles Per Hour (TMPH) capabilities.

## Braking System

Service Brakes: Four-Corner, Wet Disc, Oil Cooled, Hydraulically Actuated

Front Wet Disc Brake Surface Area		
Standard Wheel Station	89 727 cm <sup>2</sup>	13,907 in <sup>2</sup>
Extended Life Wheel Stations	134 665 cm <sup>2</sup>	20,873 in <sup>2</sup>

Rear Wet Disc Brake Surface Area		
Standard Wheel Station	134 590 cm <sup>2</sup>	20,861 in <sup>2</sup>
Extended Life Wheel Stations	155 383 cm <sup>2</sup>	24,084 in <sup>2</sup>

Standards (Service and Secondary) ISO 3450:2011

Parking Brake: Four-Corner, Multi-Disk, Spring Applied, Hydraulically Released

# 793D Mining Truck Specifications

## Standard Body – High Performance (HP)

Volume – Heaped (SAE 2:1)	152-191 m <sup>3</sup>	199-250 yd <sup>3</sup>
Base Body Weight	29 500- 32 600 kg	65,000- 71800 lbs

- Contact your local Cat dealer for body recommendation.

## Body Hoists

Twin, two-stage hydraulic cylinders with snubbing valve.		
Pump Flow – High Idle	854 L/min	226 gal/min
Relief Valve Setting – Raise	20 340 kPa	2,950 psi
Body Raise Time – High Idle	19.8 Seconds	
Body Lower Time – Float	19.9 Seconds	
Body Power Down – High Idle	17.8 Seconds	

## Suspension

Self-contained nitrogen/oil cylinders, pin-to-pin mounting, top and bottom double shear clevis attachments.		
Effective Cylinder Stroke – Front	292 mm	11.48 in
Effective Cylinder Stroke – Rear	140 mm	5.50 in
Rear Axle Oscillation	±4.9 degrees	

## Service Refill Capacities

Fuel Tank	4354 L	1,150 gal
Fuel Tank (optional)	4922 L	1,300 gal
Cooling System	852 L	225 gal
Crankcase	291 L	77 gal
Front Wheels, Each (SWS)	30 L	8 gal
Front Wheels, Each (XLWS)	56 L	15 gal
Differential and Final Drives	1022 L	270 gal
Steering System (Includes Tank)	291 L	77 gal
Brake/Hoist System (Includes Tank)	1070 L	282 gal
Torque Converter/Transmission System (Includes Sump)	227 L	60 gal

## Cab

Air Conditioning (HFC – 134A refrigerant)	10.3 kW	35,100 Btu/hr
Ambient capabilities up to 50°C (122°F)		
Heater/Defroster	12.9 kW	43,930 Btu/hr
Ambient capabilities down to –30°C (–22°F)		
Operator Sound pressure level	78 dB(A)	
Tested to ISO 6396:2008		
Rollover Protective Structure (ROPS) for:		
Operator meets	ISO 3471:2008	
Trainer meets	ISO 13459:2012	
Falling Objects Protective Structure (FOPS) for:		
Operator meets	ISO 3449:2005 Level II	
Trainer meets	ISO 13459:2012 Level II	

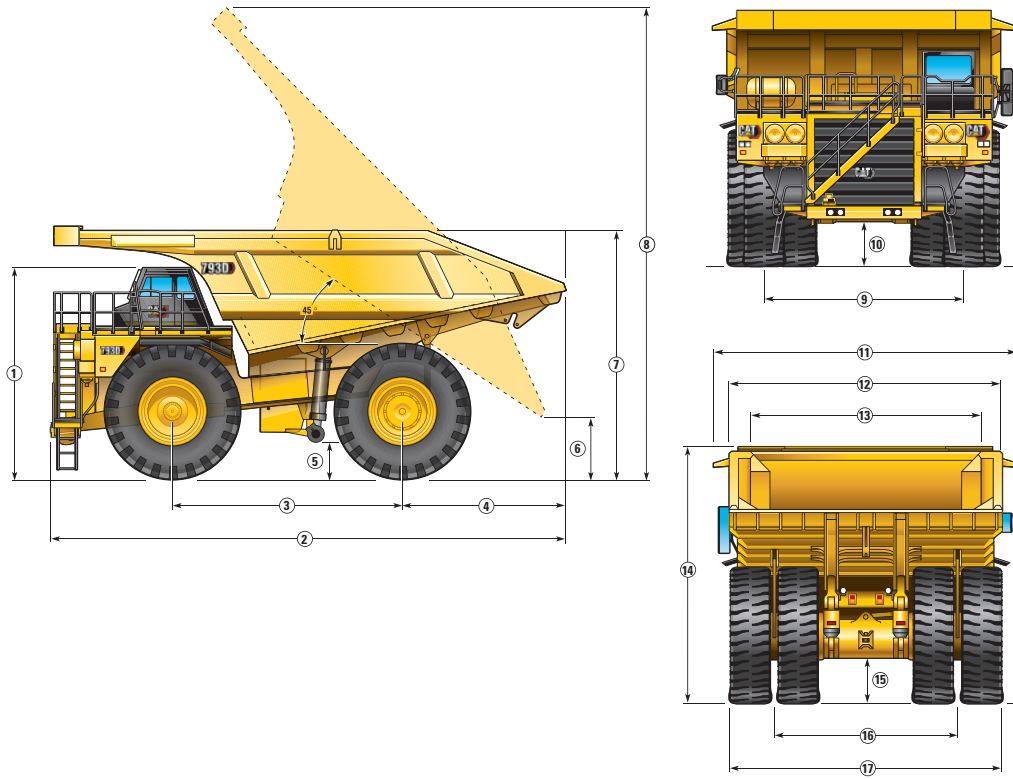
## Steering

Steer Angle	29.1 degrees	
Turning Diameter	29.36 m	96.33 ft
Steering Standards	ISO 5010:2019	

# 793D Mining Truck Specifications

## Dimensions

All dimensions are approximate with 162 m<sup>3</sup> (212 yd<sup>3</sup>) HP Body and 40.00R57 tires (MSDII body pictured).



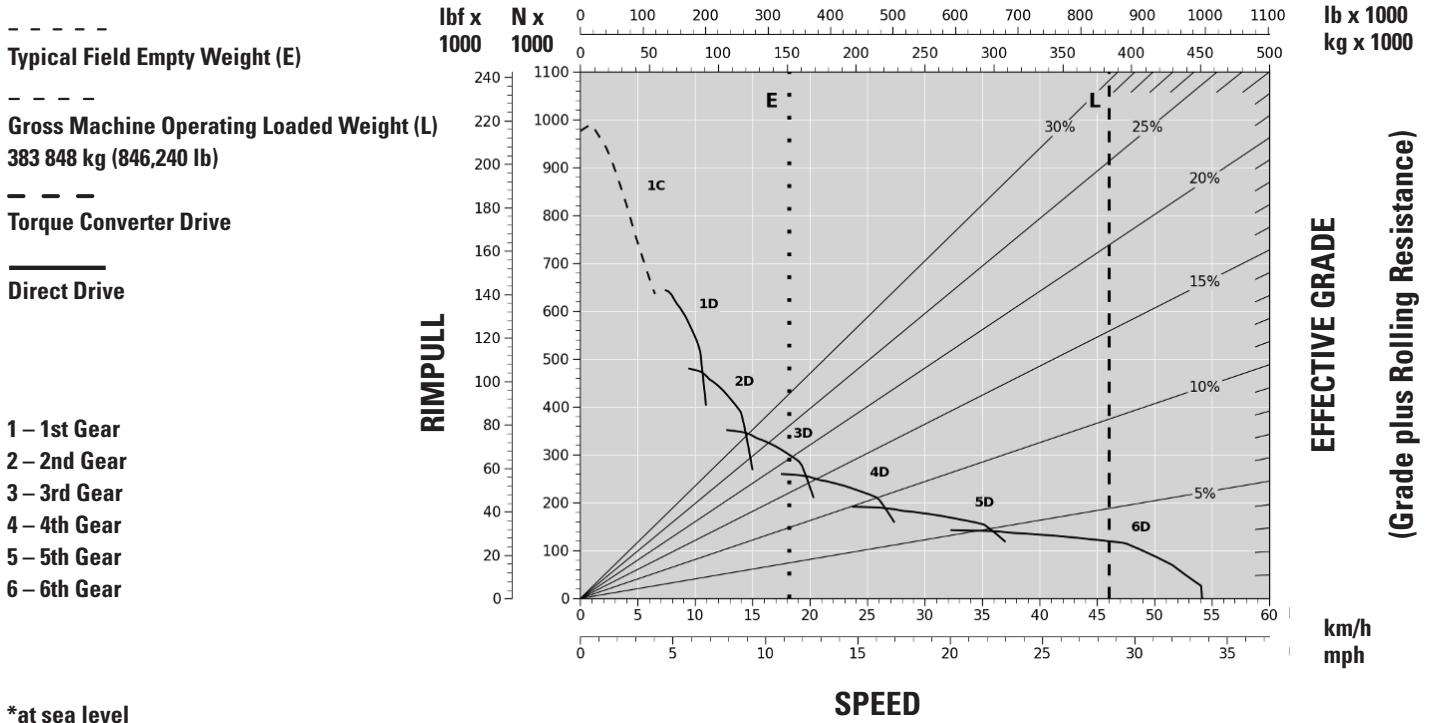
<b>1</b> Height to Top of ROPS	5584 mm	18 ft 4 in
<b>2</b> Overall Length	13 589 mm	44 ft 7 in
<b>3</b> Wheelbase	5905 mm	19 ft 5 in
<b>4</b> Rear Axle to Tail	3997 mm	13 ft 11 in
<b>5</b> Ground Clearance	1005 mm	3 ft 3 in
<b>6</b> Dump Clearance	1631 mm	5 ft 4 in
<b>7</b> Loading Height – Empty	6189 mm	20 ft 4 in
<b>8</b> Overall Height – Body Raised	13 714 mm	45 ft 0 in
<b>9</b> Centerline Front Tire Width	5610 mm	18 ft 6 in
<b>10</b> Engine Guard Clearance	1294 mm	4 ft 0 in
<b>11</b> Overall Canopy Width	8592 mm	28 ft 2 in
<b>12</b> Outside Body Width	8007 mm	26 ft 3 in
<b>13</b> Inside Body Width	7300 mm	23 ft 11 in
<b>14</b> Front Canopy Height	7375 mm	24 ft 2 in
<b>15</b> Rear Axle Clearance	1128 mm	3 ft 4 in
<b>16</b> Centerline Rear Dual Tire Width	4963 mm	16 ft 3 in
<b>17</b> Overall Tire Width	7605 mm	24 ft 11 in

# 793D Mining Truck Specifications

## 793D 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.

### GROSS WEIGHT



# 793D Mining Truck Specifications

## 793D Standard Resistive Braking (Retarding) – Continuous\*

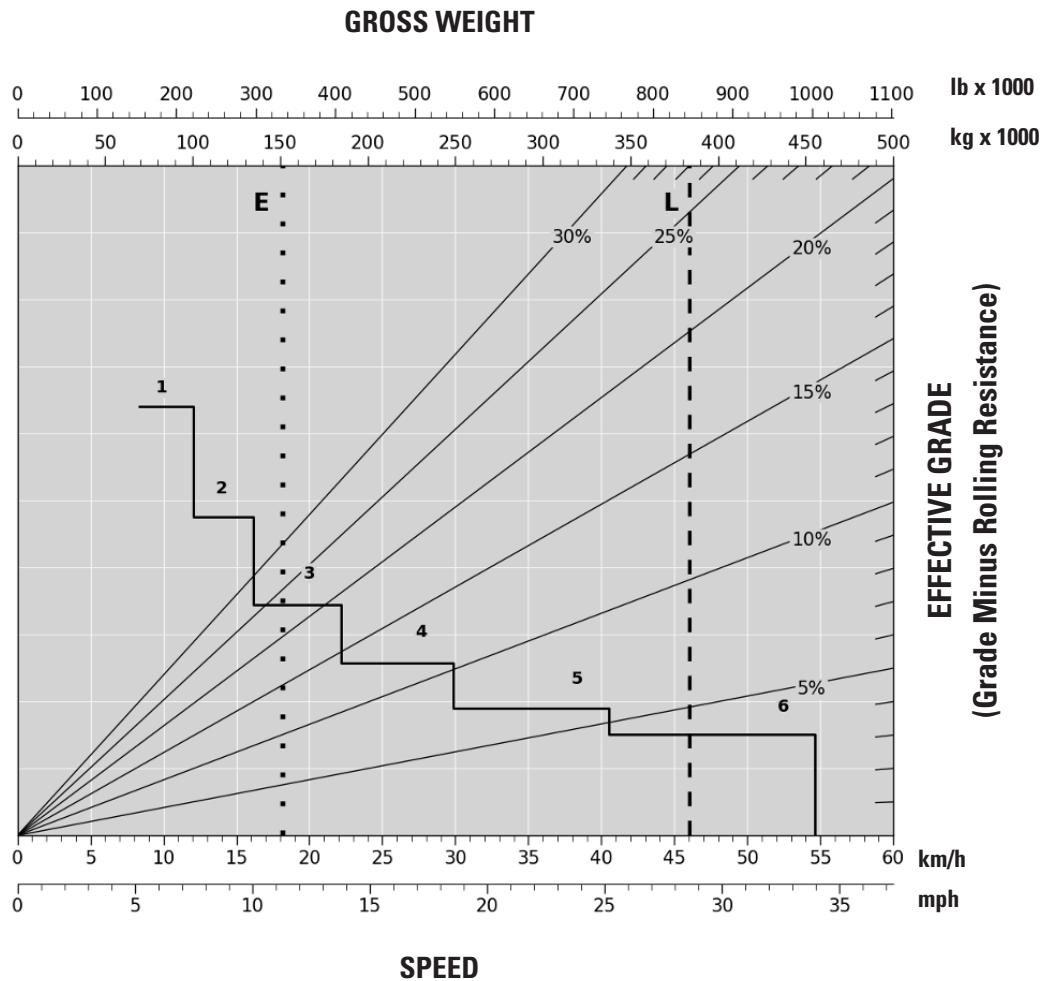
To determine performance: Add lengths of all downhill segments and, using this total, refer to proper resistive braking chart. Read from gross weight down to the percent effective grade. Effective grade equals actual % grade minus 1% for each 10 kg/t (20 lb/ton) of rolling resistance. From this weight-effective 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 40.00R57 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 (E)**

-----  
**Gross Machine Operating  
 Loaded Weight (L)**  
**383 848 kg (846,240 lb)**

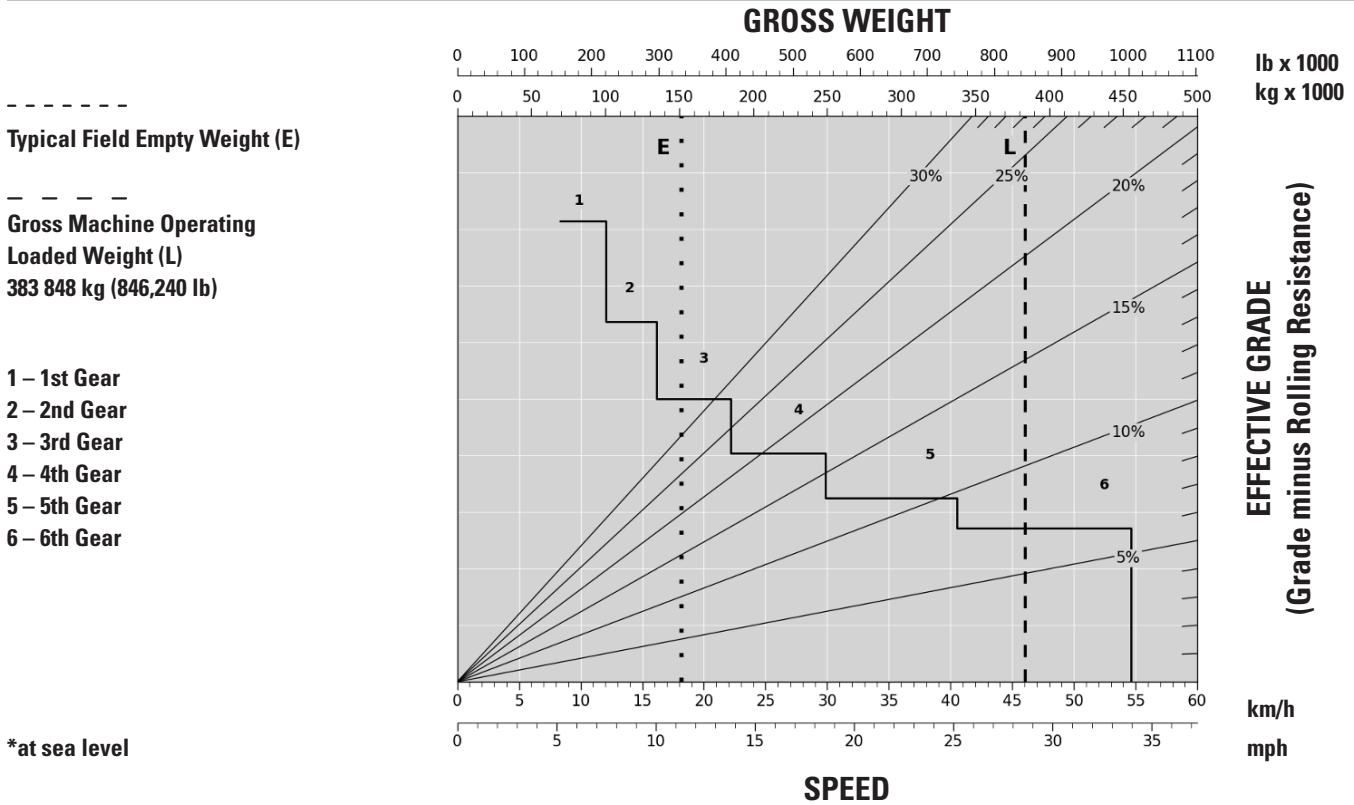
- 1 – 1st Gear
- 2 – 2nd Gear
- 3 – 3rd Gear
- 4 – 4th Gear
- 5 – 5th Gear
- 6 – 6th Gear



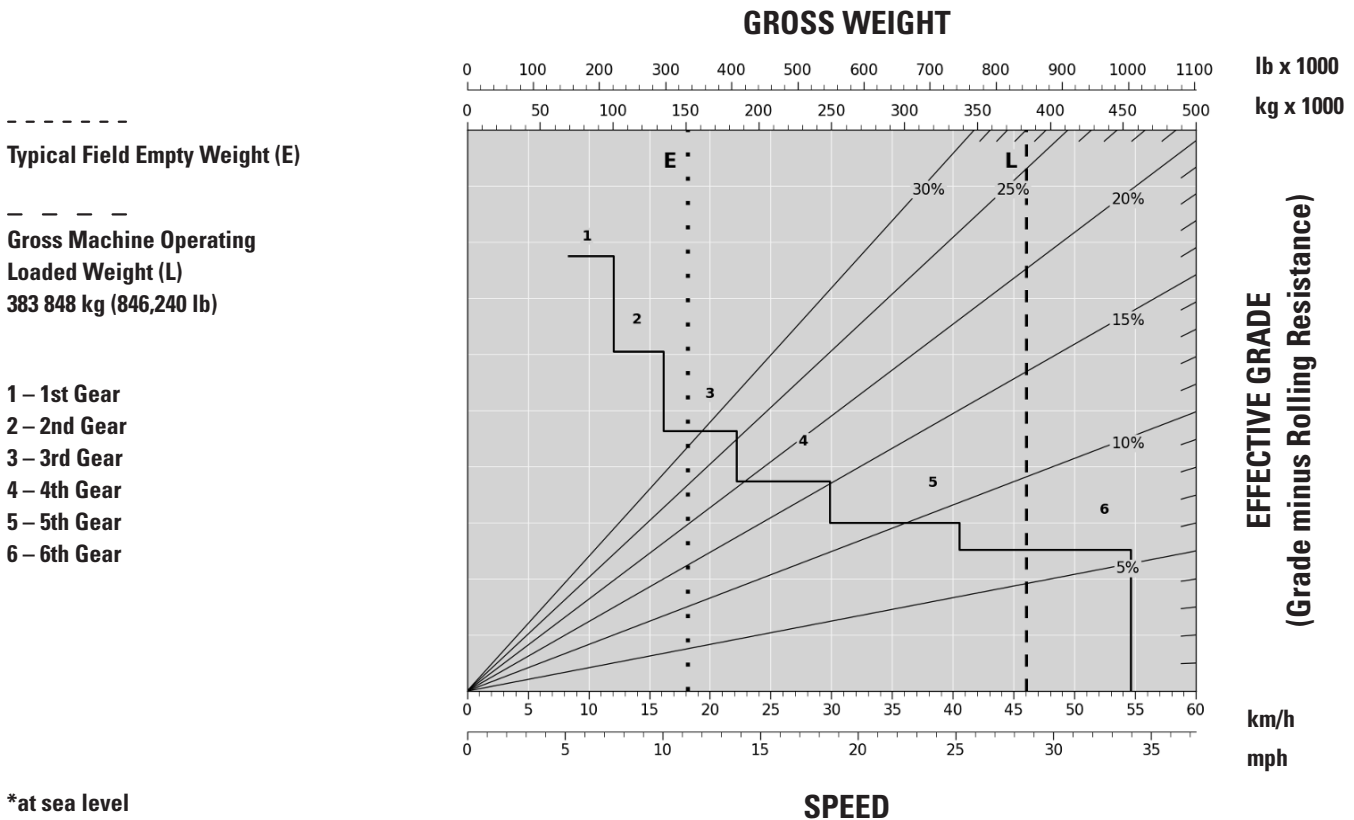
\*at sea level

# 793D Mining Truck Specifications

## 793D Standard Resistive Braking – 450 m (1,475 ft)\*

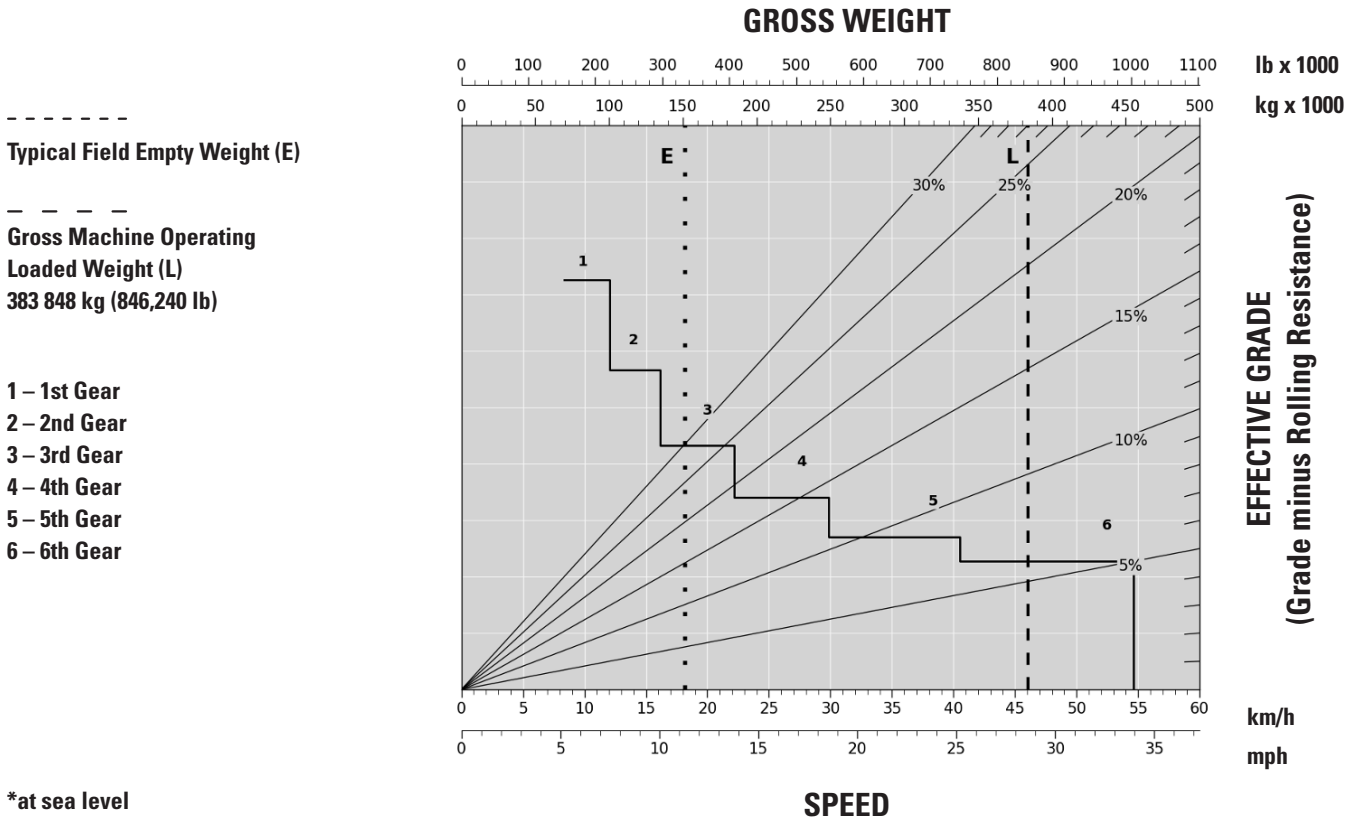


## 793D Standard Resistive Braking – 600 m (1,968 ft)\*

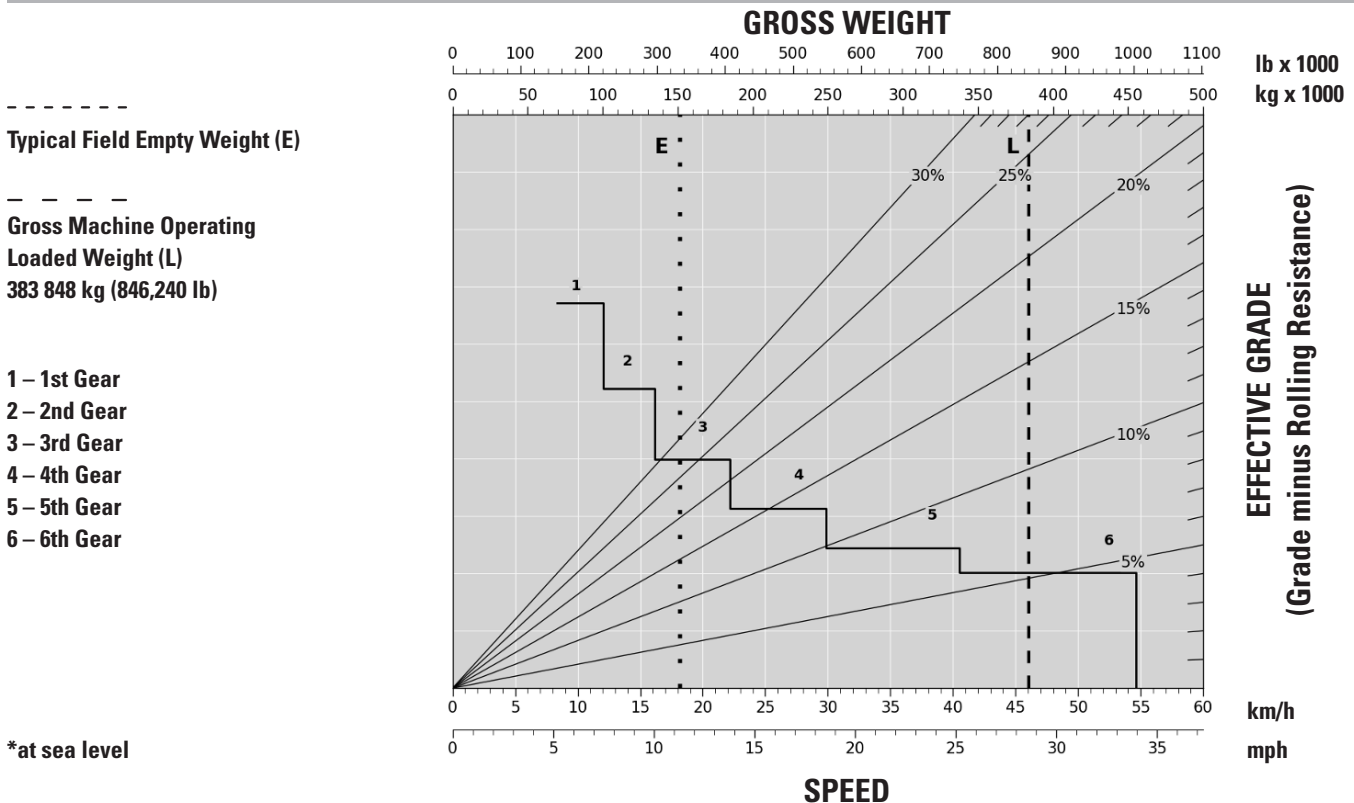


# 793D Mining Truck Specifications

## 793D Standard Resistive Braking – 900 m (2,953 ft)\*



## 793D Standard Resistive Braking – 1500 m (4,900 ft)\*





# 793D Mining Truck Specifications

## 793D Additional Resistive Braking (Retarding) – Continuous\*

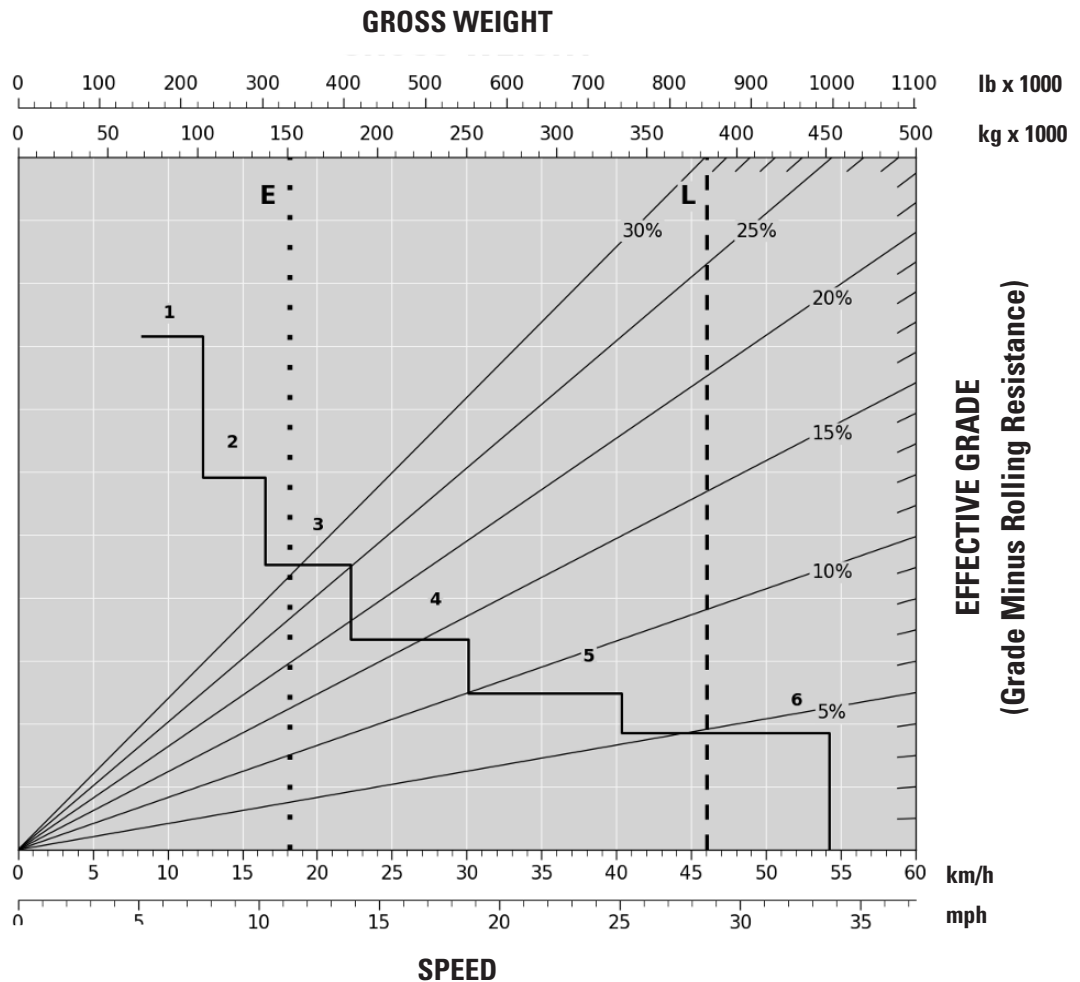
To determine performance: Add lengths of all downhill segments and, using this total, refer to proper resistive braking chart. Read from gross weight down to the percent effective grade. Effective grade equals actual % grade minus 1% for each 10 kg/t (20 lb/ton) of rolling resistance. From this weight-effective 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 40.00R57 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 (E)**

- - - - -  
**Gross Machine Operating  
 Loaded Weight (L)**  
 383 848 kg (846,240 lb)

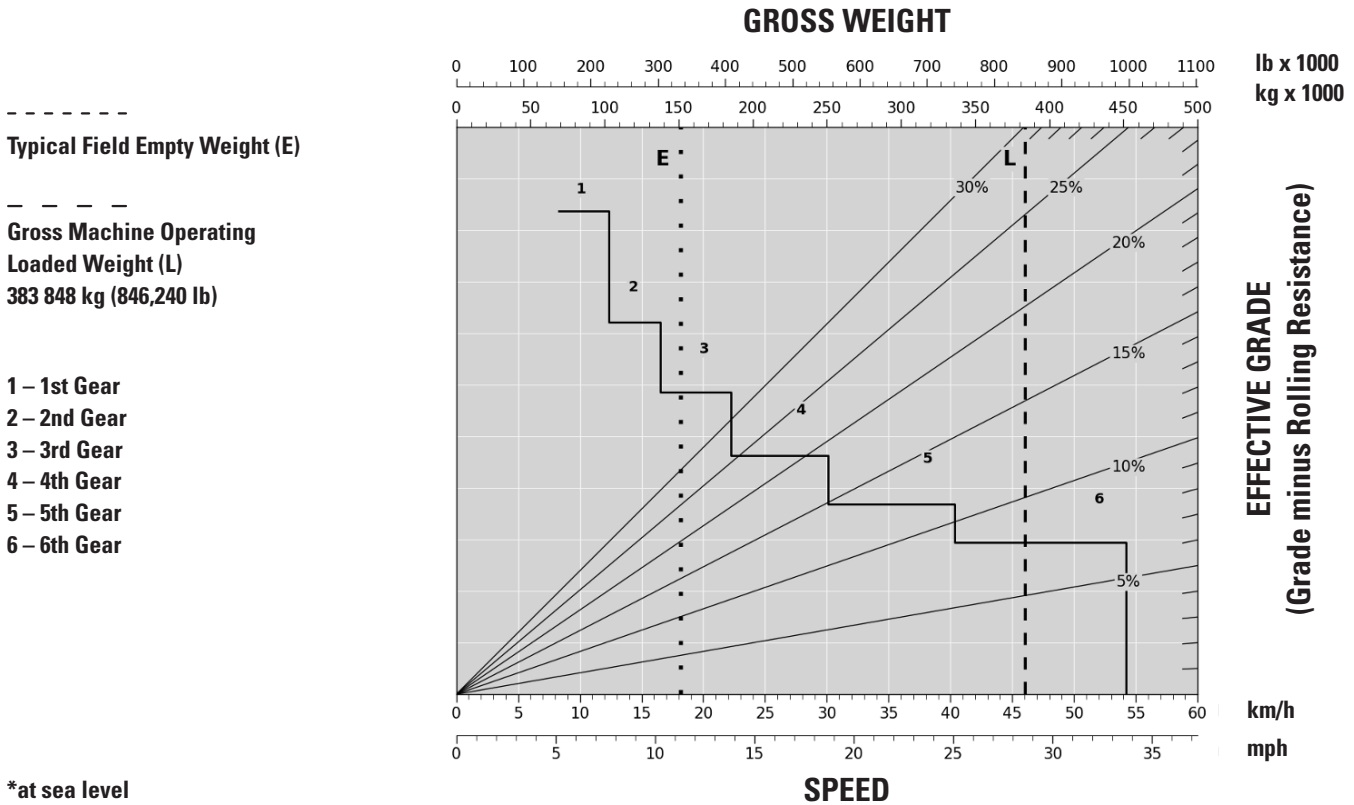
- 1 – 1st Gear
- 2 – 2nd Gear
- 3 – 3rd Gear
- 4 – 4th Gear
- 5 – 5th Gear
- 6 – 6th Gear



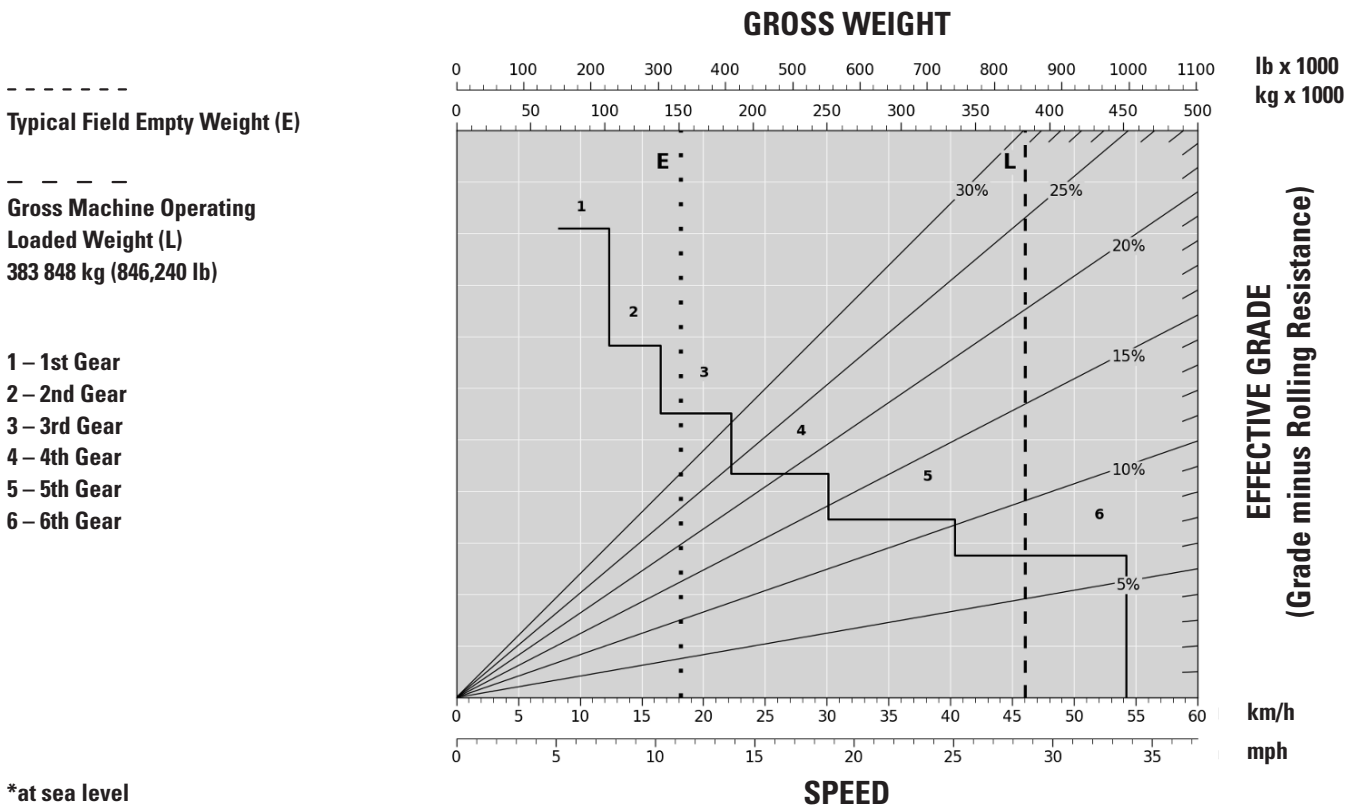
\*at sea level

# 793D Mining Truck Specifications

## 793D Additional Resistive Braking – 450 m (1,475 ft)\*

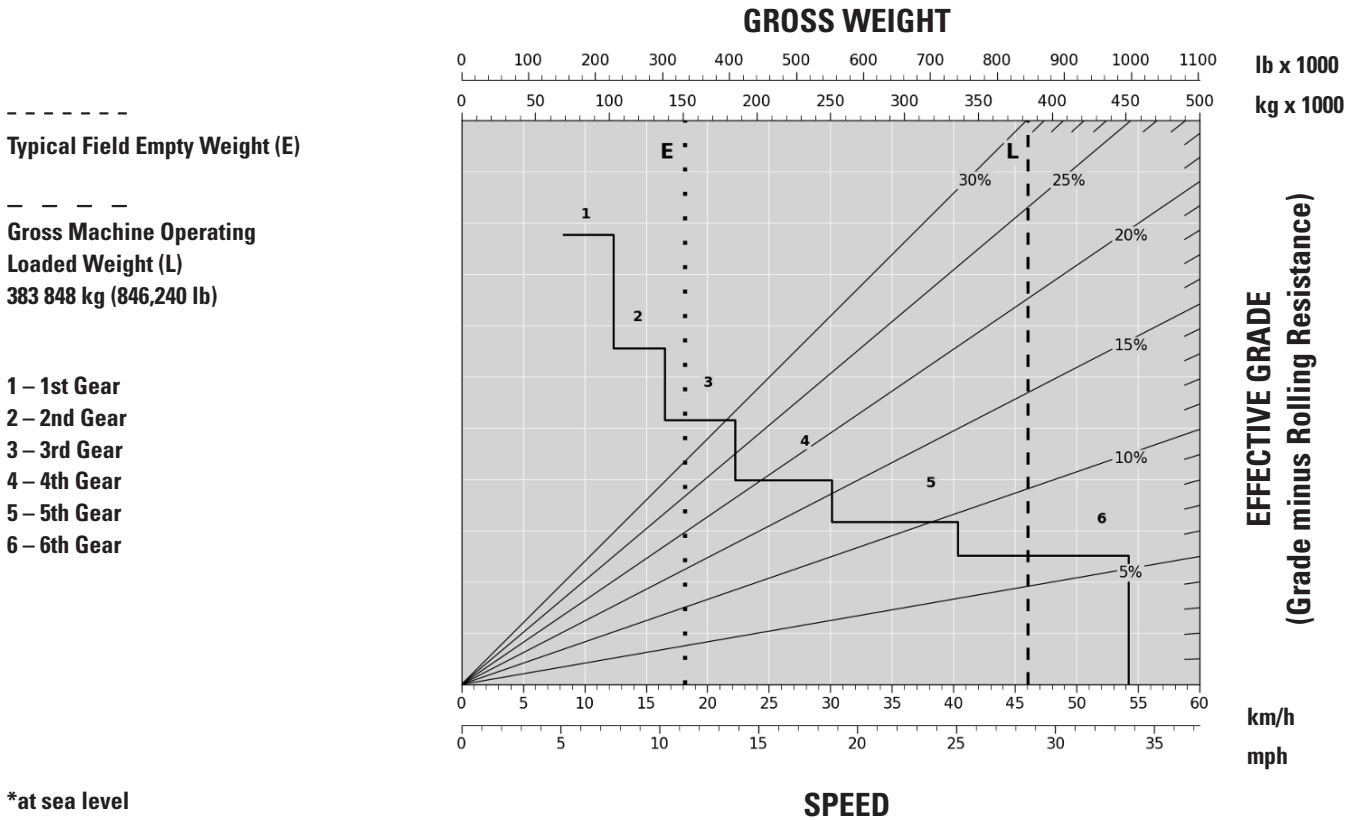


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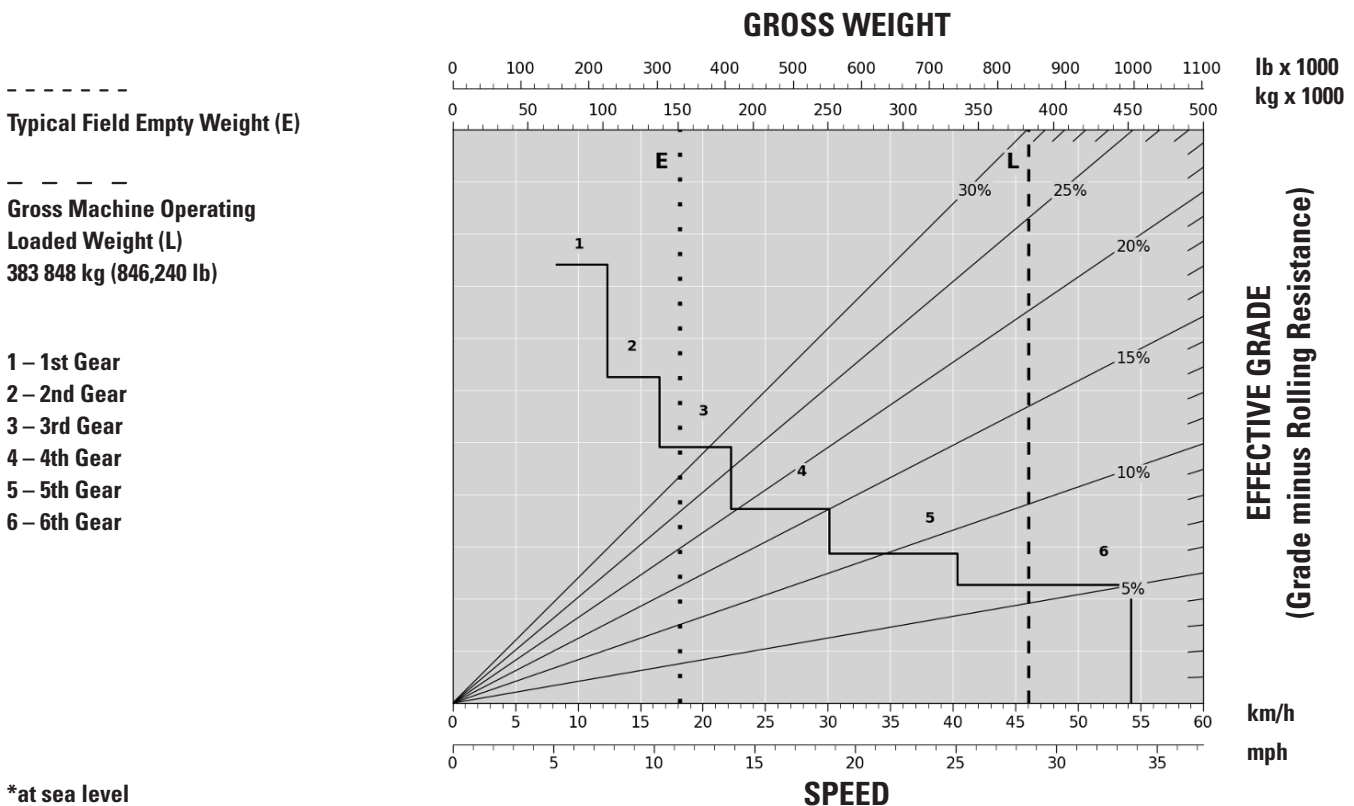


# 793D Mining Truck Specifications

## 793D Additional Resistive Braking – 900 m (2,953 ft)\*



## 793D Additional Resistive Braking – 1500 m (4,900 ft)\*



# 793D Standard and Optional Equipment

## Standard and Optional Equipment

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

	Standard	Optional		Standard	Optional
<b>POWER TRAIN</b>			<b>ELECTRICAL</b>		
<b>Cat 3516E Diesel Engine:</b>			Alarm, Back-up	✓	
• Air Cleaner with Pre-cleaner (2)	✓		Alternator (150-amp)	✓	
• Elevated Low Idle Control	✓		Batteries, 93-amp-hour, Low-maintenance, 12-volt (2)	✓	
• Ether starting aid (automatic)	✓		Converter, 12-volt	✓	
• Multi-Point Oil Pressure Sensing	✓		Electrical System, 24-volt, 15 amp	✓	
• Turbocharger (4)/Aftercooler	✓		<b>LED Lighting System:</b>	✓	
• DGB Ready engine (3516E)		✓	• Back-up Lights	✓	
• Engine pre-lube		✓	• Direction Signals and Hazard Warning	✓	
• Air Starter, turbine	✓		• Headlights, with Lo-hi beam selector	✓	
• Electric Start		✓	• Front stair access/service deck	✓	
• Automatic starter protection	✓		• Stop and Tail Lights	✓	
• Multi-point oil pressure sensing	✓		• Under-hood Light	✓	
• Oil Renewal System (ORS)		✓	Payload Indicator Lights	✓	
• Heater, engine coolant and oil (240-volt)		✓	Payload digital display		✓
• High speed crankcase oil change (Wiggins port)	✓		Battery disconnect – ground level switch	✓	
<b>Transmission:</b>			Engine shutdown – ground level switch	✓	
• 6-speed, Automatic Power Shift	✓		Transmission lockout – ground level switch		✓
• Body-up Shift Inhibitor	✓		<b>FLUIDS</b>		
• Controlled Throttle Shifting	✓		Antifreeze protection to –35° C (–30° F)	✓	
• Directional Shift Management	✓		Antifreeze protection to –50° C (–58° F)		✓
• Electronic Control and Downshift Inhibitor	✓		<b>FUEL SYSTEM</b>		
• Lock-up Torque Converter	✓		Fast-fill fuel system, ground level, Wiggins-Non-pressurizing 800 L/min (210 gal/min)	✓	
• Neutral Coast Inhibitor	✓		Fuel tank (4354 L/1,150 gal)	✓	
• Neutral Start Switch, Reverse Shift Inhibitor	✓		Fuel tank (4922 L/1,300 gal)		✓
• Programmable Top Gear	✓		Fuel tank, omission (for DGB tank retrofit)		✓
• Reverse Neutralizer during Dumping	✓		Fuel filter with separator	✓	
Driveline Guard	✓		Heater, fuel recirculation type, non-electric		✓
Extended Life Wheel Station (XLWS) powertrain		✓			
Traction Control System	✓				
Rear axle continuous filtration	✓				
Rear axle filtration cooler		✓			
Service Center, Fast Fill		✓			
<b>BRAKING SYSTEM</b>					
Oil-cooled, Multi-disc (front and rear) – Service, Resistive Braking, Parking, Secondary	✓				
Secondary, Emergency, spring applied with pressure release	✓				
Automatic Resister Control	✓				
Additional brake cooling package for downhill hauling		✓			
Brake Release Motor (towing)	✓				
Brake wear indicator gauges		✓			
Engine Overspeed Protection	✓				
Extended life brake disc material	✓				

(continued on next page)

## Standard and Optional Equipment *(continued)*

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

	Standard	Optional		Standard	Optional
<b>OPERATOR ENVIRONMENT</b>			<b>OPERATOR ENVIRONMENT <i>(continued)</i></b>		
Air Cleaner Service Indicator	✓		Steering Wheel, Tilt, Padded, Telescopic	✓	
Air Conditioner	✓		Storage Compartment	✓	
Ashtray	✓		Transmission gear indicator	✓	
Auxiliary power connection/cigarette lighter	✓		VIMS™ Keypad	✓	
Coat Hook	✓		VIMS Message Center with Universal Gauge	✓	
<b>Standard Cab:</b>			Windshield Wiper and Washer	✓	
• Deluxe operator seat	✓		Windshield Visor, Retractable	✓	
• Basic companion seat	✓		<b>RIMS AND WHEELS</b>		
• Payload Indicator lamps	✓		Rim mounting arrangements for Standard and Quick Change rims		✓
• Retractable windshield visor	✓		Standard 29" x 57" rims with 6" high flange		✓
<b>Deluxe Cab:</b>			Quick Change 29" x 57" rims with 6" high flange		✓
• Premium Plus, heated, cooled and ventilated operator seat		✓	Rim diffuser		✓
• Deluxe air suspended trainer seat		✓	Rim mounting guard		✓
• Cab cleanout vacuum		✓	<b>OTHER EQUIPMENT</b>		
• Operator footrest		✓	24-volt starting receptacle (for air start)		✓
• External digital payload displays		✓	Air Line Dryer (2)	✓	
• Road Analysis Control (RAC)		✓	Automatic Lubrication System (Lincoln)	✓	
Diagnostic connection port	✓		Body Mounting Group	✓	
Dome Courtesy Light	✓		Dumping, Auxiliary Quick Connect for "Buddy Dumping"	✓	
Electric Engine Control Fault Indicator	✓		Heated body exhaust package		✓
Electric hour meter	✓		Hub odometer (km)		✓
Electric Window (Operator Only)	✓		Portable fire extinguisher		✓
Entertainment radio ready: – 5-amp converter, speakers, antenna, and wiring	✓		Powered access stairway		✓
Gauge panel: – Air pressure, Brake oil temperature, Engine coolant temperature, Fuel level	✓		<b>Reservoirs (Separate):</b>		
Glass, Tinted	✓		• Brake/Hoist	✓	
Heated mirrors, right and left	✓		• Steering/Fan	✓	
Heater/defroster	✓		• Transmission/Converter	✓	
Horn	✓		Rock Ejectors	✓	
Insulated and Sound Suppressed	✓		Stairway access, 600 mm (24 in)	✓	
<b>Integrated Object Detection System:</b>			Steering, Auxiliary Quick Connect for Towing	✓	
• Radar and camera	✓		Tie Down Eyes	✓	
• Camera only (radar ready)		✓	Tow Hooks, Front	✓	
• Omission, camera and radar		✓	Tow Pin, Rear	✓	
<b>Product Link™ Elite monitoring system:</b>			Vandalism Protection Locks	✓	
• Max payload speed manager	✓		VIMS Dataports (2)	✓	
• Cellular radio	✓		Walkway and Handrail for Rear Cab Access		✓
• Satellite radio		✓	Wheel chocks		✓
Seat, operator, air suspended	✓		Working at heights package		✓
Seat, trainer, non-suspended, full-size	✓				
Seatbelt, operator, park brake safety	✓				
Seatbelt, operator, three points, retractable, 75 mm (3 in) wide	✓				
Seatbelt, trainer, two points, retractable, 75 mm (3 in) wide	✓				
Speedometer and tachometer	✓				
Supplemental steering (automatic)	✓				

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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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