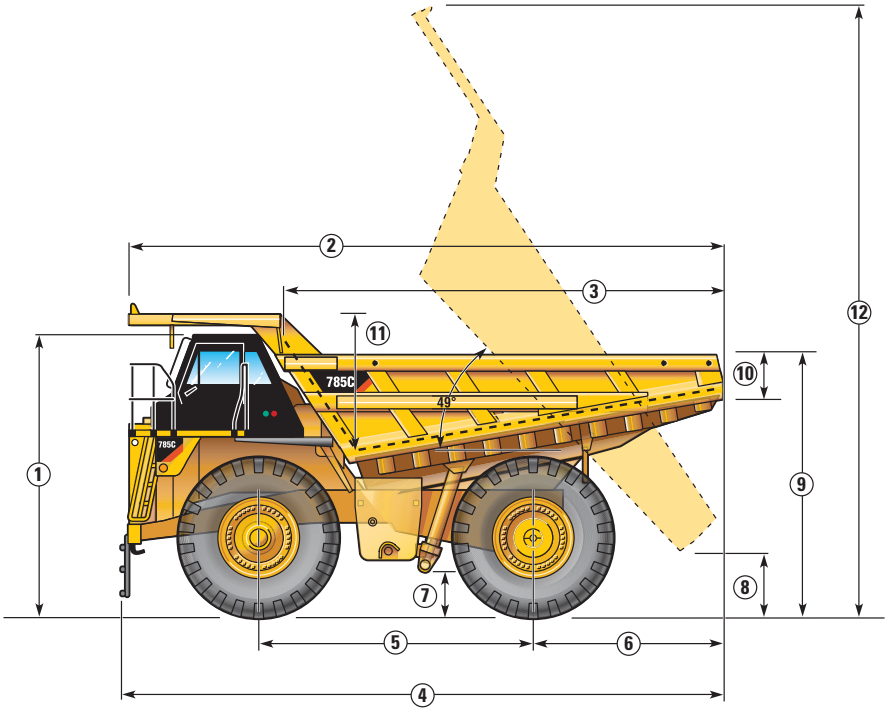
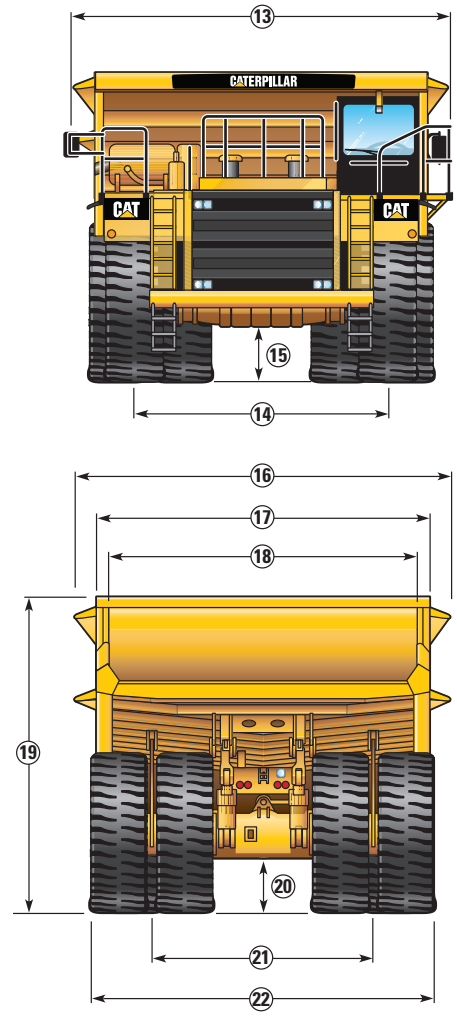
785C Mining Truck

Dimensions

All dimensions are approximate.





1	Height to Top of ROPS	5122 mm	16 ft 10 in
2	Overall Body Length	10 615 mm	34 ft 10 in
3	Inside Body Length	7652 mm	25 ft 2 in
4	Overall Length	11 024 mm	36 ft 3 in
5	Wheelbase	5182 mm	17 ft 0 in
6	Rear Axle to Tail	3410 mm	11 ft 3 in
7	Ground Clearance	987 mm	3 ft 3 in
8	Dump Clearance	1284 mm	4 ft 3 in
9	Loading Height – Empty	4968 mm	16 ft 4 in
10	Rear Sidewall Height	906 mm	3 ft 0 in
11	Inside Body Depth – Max.	2132 mm	7 ft 0 in

12	Overall Height – Body Raised	11 207 mm	36 ft 10 in
13	Operating Width	6640 mm	21 ft 10 in
14	Centerline Front Tire Width	4850 mm	15 ft 11 in
15	Engine Guard Clearance	1057 mm	3 ft 6 in
16	Overall Canopy Width	6200 mm	20 ft 5 in
17	Outside Body Width	5890 mm	19 ft 4 in
18	Inside Body Width	5510 mm	18 ft 1 in
19	Front Canopy Height	5769 mm	19 ft 0 in
20	Rear Axle Clearance	1080 mm	3 ft 7 in
21	Centerline Rear Dual Tire Width	4285 mm	14 ft 1 in
22	Overall Tire Width	6274 mm	20 ft 8 in

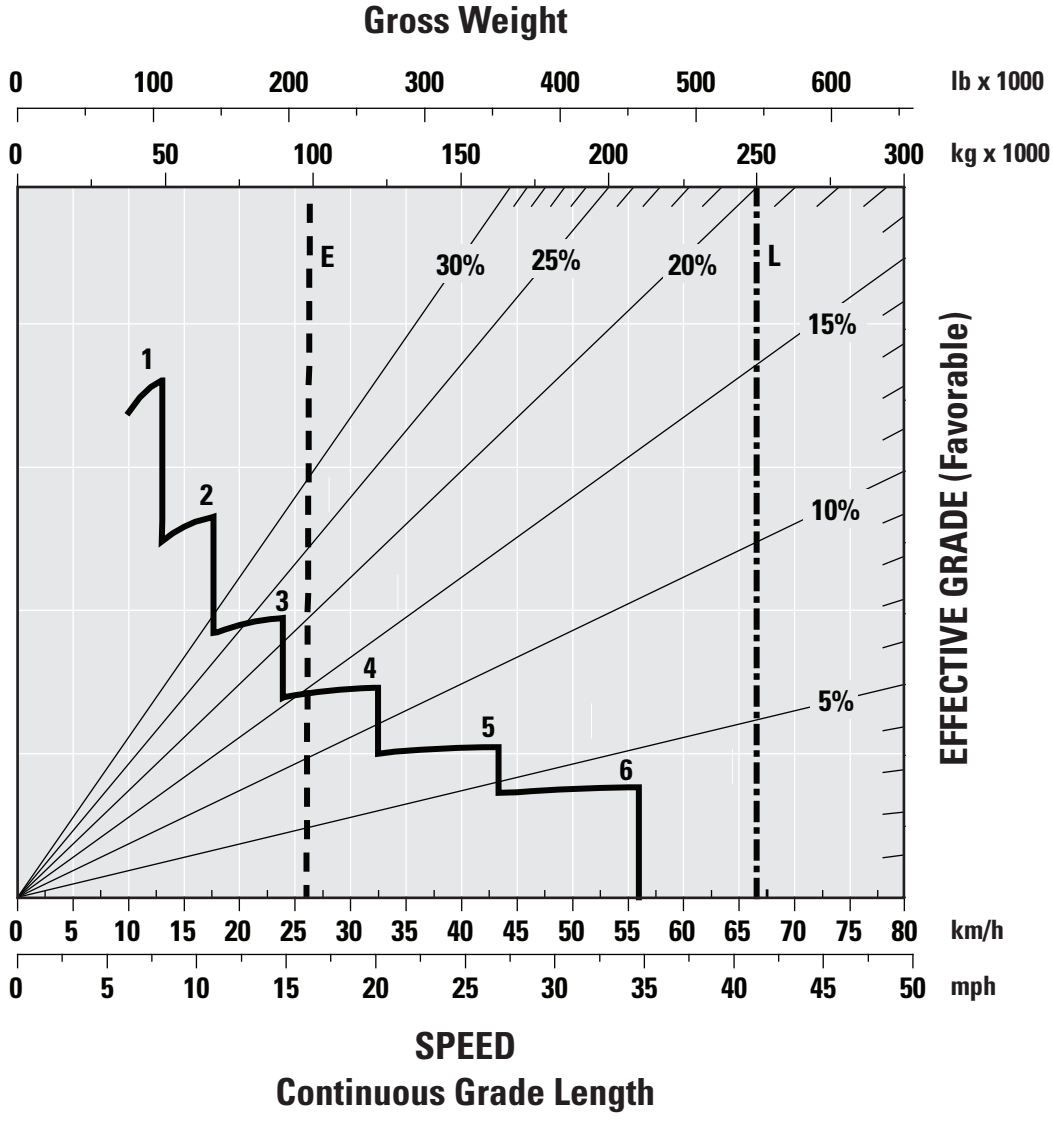
Retarding Performance

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 33.00-R51 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
249 500 kg (550,000 lb)

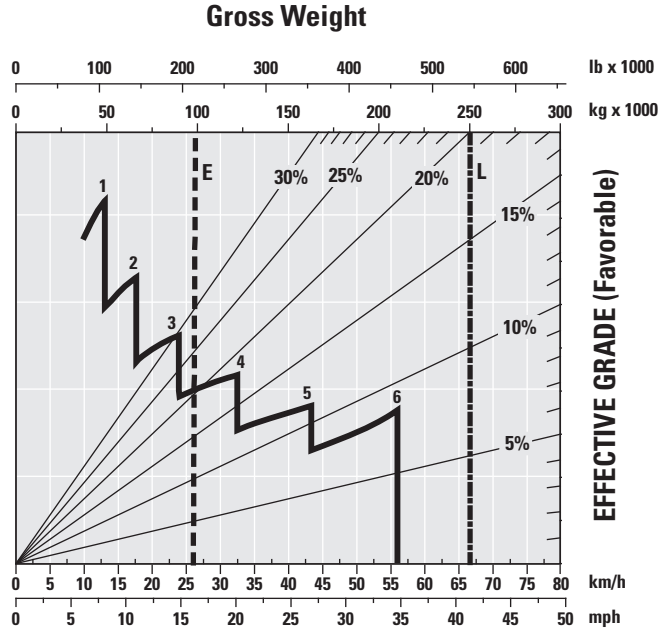


E – Empty

L – Loaded

Retarding Performance

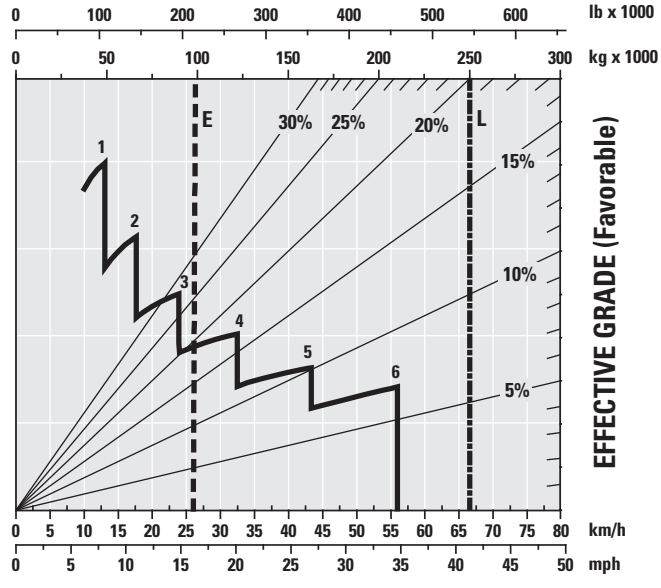
Typical Field Empty Weight
Gross Machine Operating Weight
249 500 kg (550,000 lb)



E – Empty
L – Loaded

Grade Distance – 450 m (1,500 ft)

Typical Field Empty Weight
Gross Machine Operating Weight
249 500 kg (550,000 lb)

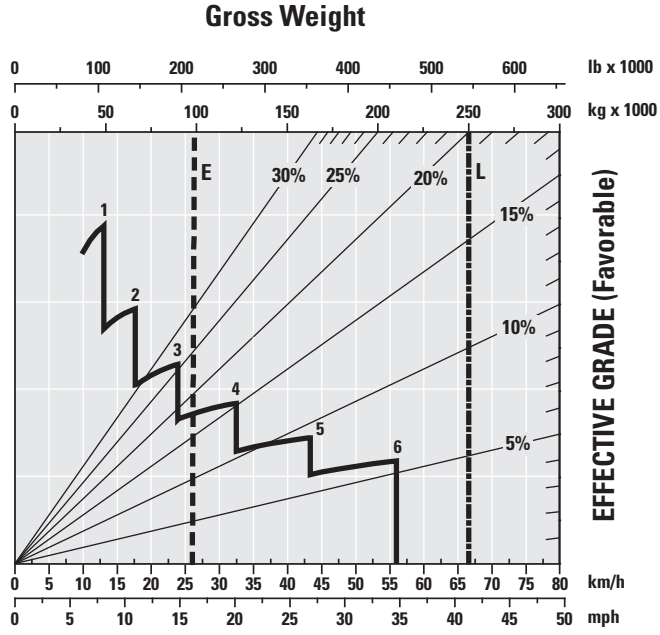


E – Empty
L – Loaded

Grade Distance – 600 m (2,000 ft)

Retarding Performance

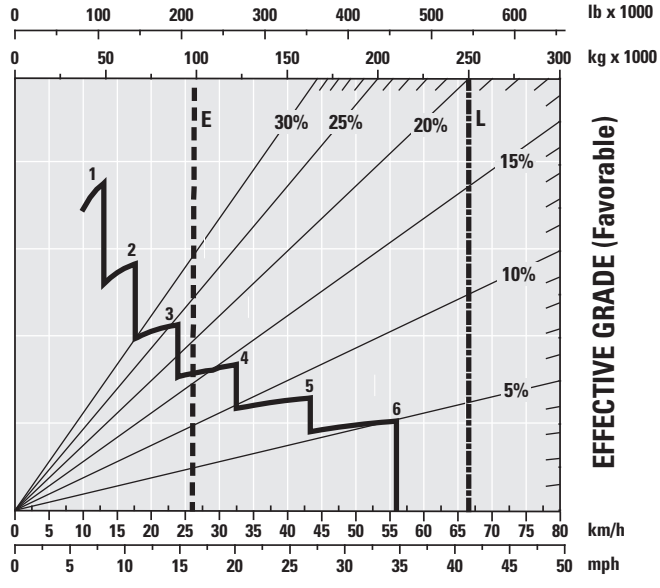
Typical Field Empty Weight
Gross Machine Operating Weight
249 500 kg (550,000 lb)



E – Empty
L – Loaded

Grade Distance – 900 m (3,000 ft)

Typical Field Empty Weight
Gross Machine Operating Weight
249 500 kg (550,000 lb)



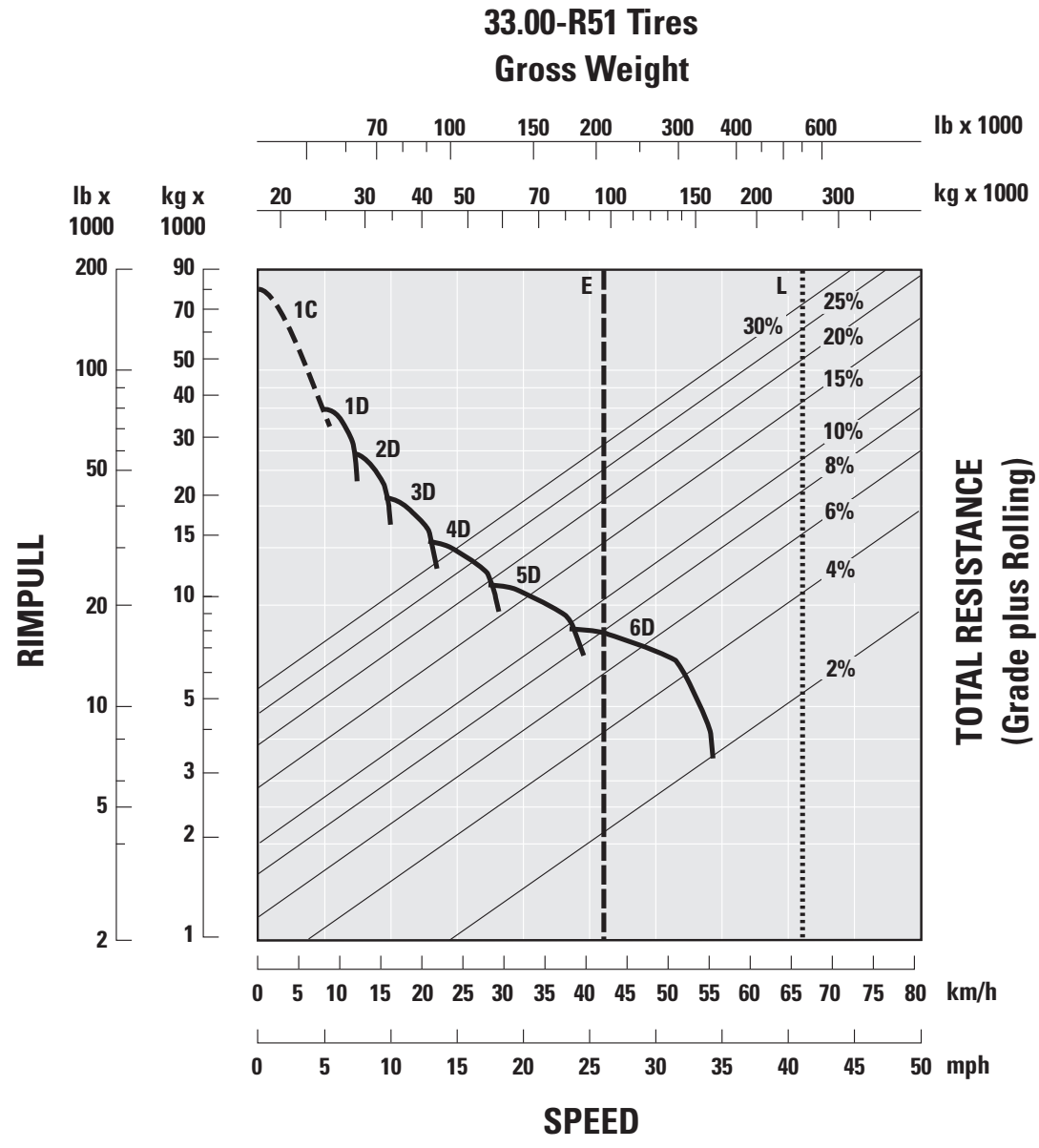
E – Empty
L – Loaded

Grade Distance – 1500 m (5,000 ft)

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
136 080 kg (300,000 lb)



Torque Converter Drive
Direct Drive

E – Empty
L – Loaded

785C Mining Truck

Weight/Payload Calculation*

(Example)

	Flat Floor		Dual Slope	
	kg	lb	kg	lb
Empty Chassis Weight	55 421	122,180	55 421	122,180
Fuel Tank and Fuel 1892 L (500 gal)	2232	4,920	2232	4,920
Tires (33.00-R51)	10 492	23,130	10 492	23,130
Rim 610 mm (24 in)	6323	13,940	6323	13,940
Chassis Weight	74 468	164,170	74 468	164,170
Debris Allowance (4% of chassis)	2979	6,567	2979	6,567
Body Weight	25 687	56,630	21 258	46,865
Body Attachments Weight	1996	4,400	0	0
Additional Attachments Weight	+	+	+	+
Total Empty Operating Weight	105 129	231,767	98 704	217,602
Target Payload	**144 351**	**318,233**	**150 776**	**332,398**
Gross Machine Operating Weight	249 480	550,000	249 480	550,000

*** NOTE:** Refer to Caterpillar's 10/10/20 Payload Policy for calculating maximum gross machine weight allowable.