

735
Articulated Truck

Technical Specifications

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

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735 Articulated Truck Specifications

Engine

Engine Model	Cat® C13	
Gross Power (SAE J1995)	306 kW	410 hp
Net Power (SAE J1349)	298 kW	400 hp
Engine Power (ISO 14396)	301 kW	404 hp
Bore	130 mm	5.1 in
Stroke	157 mm	6.2 in
Displacement	12.5 L	736 in3

- Advertised power is tested at 1,800 rpm.
- Advertised power is tested per the specified standard in effect at the time of manufacture.
- The net power advertised is the power available at the flywheel when the engine is equipped with alternator, air cleaner, muffler, and fan at minimum speed.
- Net power when the fan is at maximum speed is 298 kW (400 hp) per the SAE reference conditions.
- Two engine options are available:
  1. Meets Brazil MAR-1 emission standards, equivalent to U.S. EPA Tier 3 and EU Stage IIIA.
  2. Noncertified configuration that is equivalent to U.S. EPA Tier 2 and EU Stage II.

No Engine Derating Below	3810 m	12,500 ft
Peak Engine Torque Gross (SAE J1995:2014)	2192 N·m	1,617 lbf-ft
Peak Engine Torque Net (SAE J1349:2011)	2155 N·m	1,589 lbf-ft
Peak Engine Torque Speed	1,200 rpm	

Weights

Rated Payload	32 tonnes	35.3 tons

Air Conditioning System

- The air conditioning system on this machine contains the fluorinated greenhouse gas refrigerant R134a or R1234yf. See the label or instruction manual for identification of the gas.
- If equipped with R134a (Global Warming Potential = 1430), the system contains 1.1 kg (2.4 lb) of refrigerant which has a CO_2 equivalent of 1.716 metric tonnes (1.891 tons).

Body Capacities

Heaped SAE 2:1	20.0 m3	26.2 yd3
Struck	15.5 m3	20.3 yd3
Tailgate Heaped SAE 2:1	21.3 m3	27.9 yd3
Tailgate Struck	16.3 m3	21.3 yd3

Transmission

Forward 1	8 km/h	5 mph
Forward 2	15 km/h	9 mph
Forward 3	23 km/h	14 mph
Forward 4	35 km/h	22 mph
Forward 5	48 km/h	30 mph
Forward 6	57 km/h	35 mph
Reverse 1	9 km/h	6 mph

Sound Levels

Interior Cab	72 dB(A)

- The declared dynamic operator sound pressure level is 72 dB(A) when ISO 6396:2008 is used to measure the value for an enclosed cab. The measurement was conducted at 70% of the cooling fan's maximum speed. The sound level may vary at different cooling fan speeds. The measurement was conducted with the cab doors and the cab windows closed. The cab was properly installed and maintained.
- Hearing protection may be needed when operating with an open operator station and cab or when not properly maintained or with doors/windows open for extended periods or in noisy environments.

Operating Weights

Front Axle – Empty	14 960 kg	32,981 lb
Center Axle – Empty	5070 kg	11,177 lb
Rear Axle – Empty	4850 kg	10,692 lb
Total – Empty	24 880 kg	54,851 lb
Front Axle – Rated Load	4100 kg	9,039 lb
Center Axle – Rated Load	13 950 kg	30,754 lb
Rear Axle – Rated Load	13 950 kg	30,754 lb
Total – Rated Load	32 000 kg	70,548 lb
Front Axle – Loaded	19 060 kg	42,020 lb
Center Axle – Loaded	19 020 kg	41,932 lb
Rear Axle – Loaded	18 800 kg	41,447 lb
Total – Loaded	56 880 kg	125,399 lb

Body Plate

High strength Brinell HB450 wear resistant steel

Body Plate Thickness

Front Plate	7 mm	0.28 in
Base Plate	13 mm	0.51 in
Side Plates	11 mm	0.43 in

Service Refill Capacities

Fuel Tank	412 L	108.8 gal
Cooling System	83 L	21.9 gal
Hydraulic System	110 L	29.1 gal
Engine Crankcase	38 L	10.0 gal
Transmission	56 L	12.3 gal
Final Drives/Differential	125 L	33.0 gal
Output Transfer Gear Box	25 L	5.5 gal

Body Hoist

Raise Time	12 Seconds
Lower Time	11 Seconds

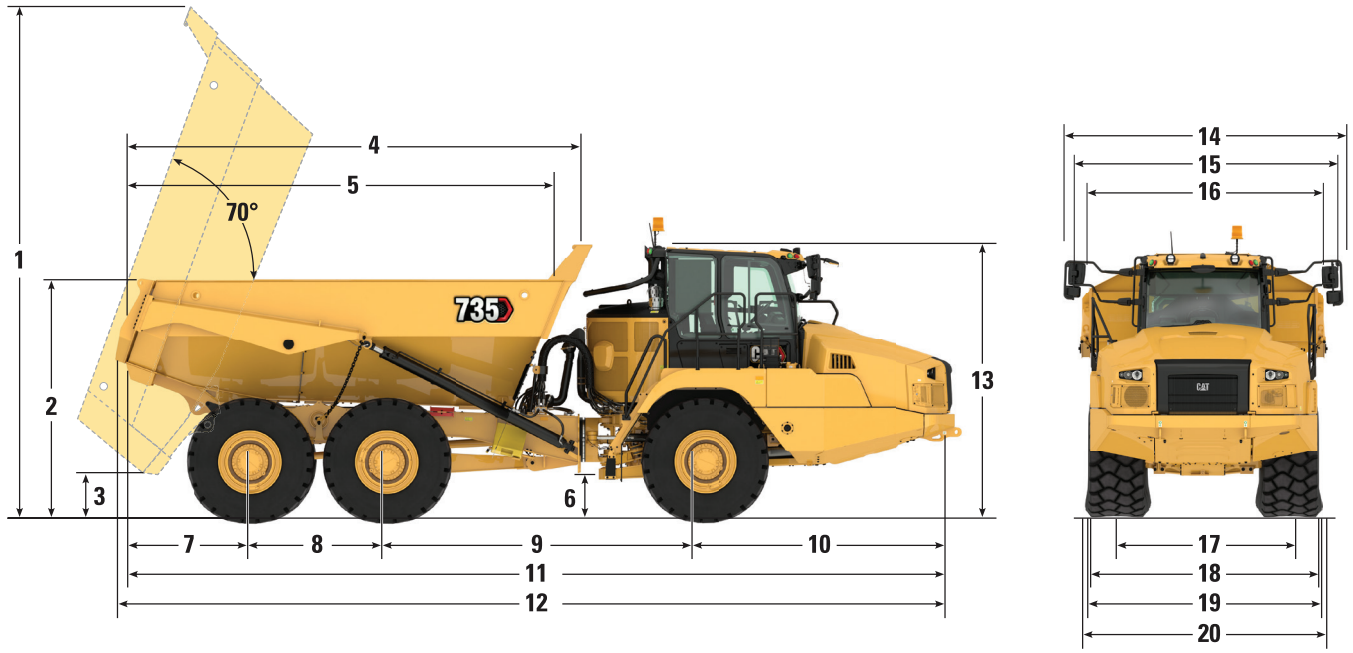
Standards

Brakes	ISO 3450:2011
Cab/Falling objects protective structure (FOPS)	ISO 3449:2005 Level II
Cab/Rollover protective structure (ROPS)	ISO 3471:2008
Steering	ISO 5010:2019

735 Articulated Truck Specifications

Dimensions

All dimensions are approximate.



		mm	ft/in
1	Body Height Fully Tipped	6535	21' 5"
2	Load over Height	3055	10' 1"
3	Ground Clearance – Body Fully Tipped	551	1' 7"
4	Body Length	5823	19' 2"
5	Body Length Inside	5472	18' 0"
6	Ground Clearance	536	1' 8"
7	Rear Axle Center to Body Rear	1556	5' 11"
8	Mid Axle to Rear Axle Center	1700	5' 6"
9	Mid Axle to Front Axle (Centers)	3979	13' 1"
10	Front Axle Center to Machine Front	3210	10' 6"
11	Overall Length	10 445	34' 3"
12	Overall Length with Tailgate	10 573	34' 7"
13	Height Transport Position	3488	11' 5"
14	Overall Width	3676	12' 1"
15	Width over Tailgate/Width Including Tailgate	3400	11' 2"
16	Body Width	3034	10' 0"
17	Track Width	2275	7' 5"
18	Width over Tire	2950	9' 7"
19	Width over Fenders	3013	9' 9"
20	Max Laden over Tire Bulge	3082	10' 2"

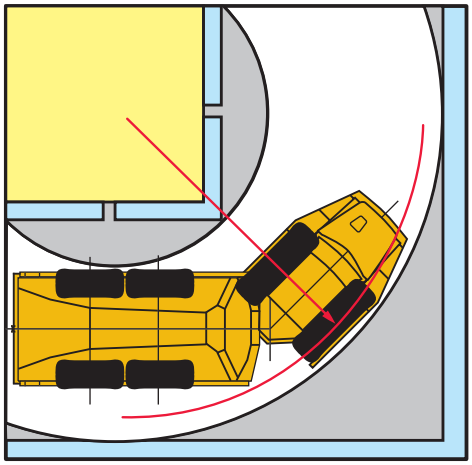
Turning Circle

Dimensions are for machines equipped with 750/65 R25 tires.

Turning Dimensions		
Steer Angle – From Center Left/Right	45°	
SAE Turning Radius	7470 mm	294 in
Clearance Radius	8075 mm	318 in
Inside Radius	3793 mm	149 in
Aisle Width	5393 mm	212 in

Steering

Lock to Lock	4.75 seconds at 60 rpm



Optimal Loader/Truck Pass Matching

Hydraulic Excavators	349/352	336
Passes	4-5	5-6

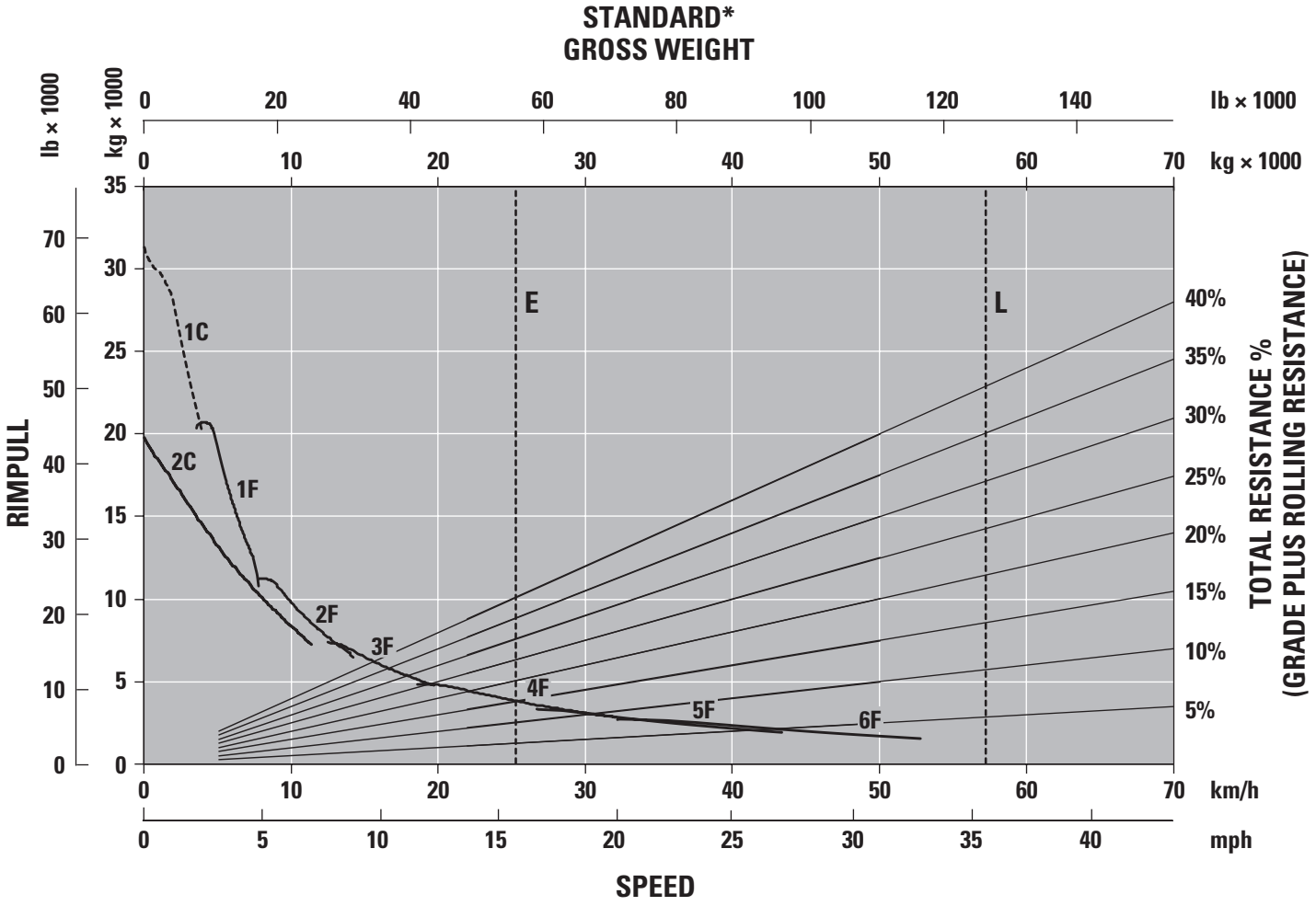
Wheel Loaders	972/972 XE	966/966 XE	962	950
Passes	3-4	4	4-5	5

An optimum system match gives you a major productivity advantage. The 735 is an excellent match for the Cat 349/352 and 336 Hydraulic Excavators and Cat 972, 966, 962, and 950 Wheel Loaders. Having matched loading and hauling tools results in increased production and lower system costs per unit of volume moved.

Gradeability/Speed/Rimpull

To determine performance, read from Gross Weight down to % Total Resistance. Total Resistance equals actual % grade plus 1% for each 10 kg/metric ton (20 lb/ton) of Rolling Resistance. From this point, read horizontally to the curve with the highest attainable speed range.

Then, go down to Maximum Speed. Usable Rimpull depends on traction available.

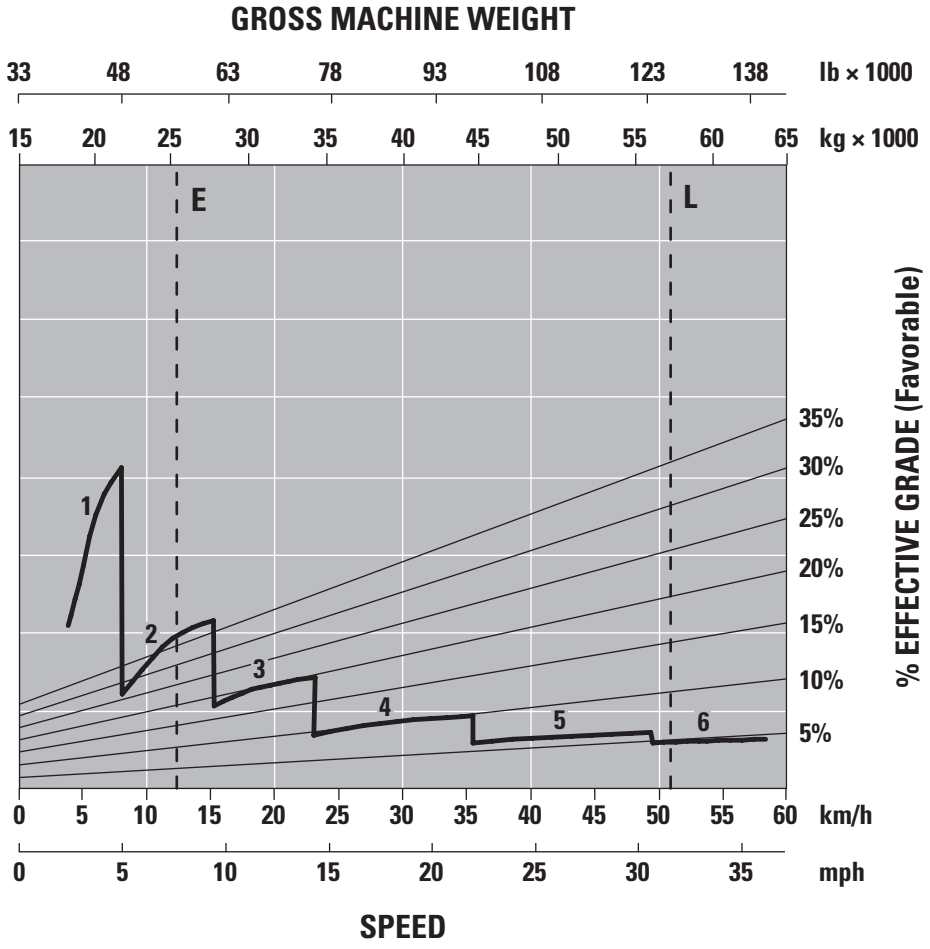


1C – 1st Gear (Converter Drive)
1F – 1st Gear (Direct Drive)
2C – 2nd Gear (Converter Drive)
2F – 2nd Gear (Direct Drive)
3F – 3rd Gear
4F – 4th Gear
5F – 5th Gear
6F – 6th Gear

E – Empty 24 880 kg (54,851 lb)
L – Loaded 56 880 kg (125,399 lb)
* at sea level

Retarding Performance

To determine performance, read from Gross Weight down to % Effective Grade. Effective Grade equals actual % favorable grade plus 1% for each 10 kg/metric ton (20 lb/ton) of Rolling Resistance. From this point, read horizontally to the curve with the highest attainable speed range.
Then, go down to Maximum Speed. Retarding effect on these curves represents full application of the retarder.



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

E – Empty 24 880 kg (54,851 lb)
L – Loaded 56 880 kg (125,399 lb)

735 Articulated Truck Standard & Optional Equipment

Standard and Optional Equipment

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

	Standard	Optional
OPERATOR ENVIRONMENT		
Air conditioning	✓	
Adjustable air vents	✓	
Combined gear selection and hoist control lever	✓	
Glass windows: front, laminated and tinted; sides and rear, toughened and tinted	✓	
Heater and defroster with four-speed fan	✓	
Infrared glass – high ambient cab		✓
Liquid Crystal Display (LCD): alert indicator, selected gear and direction, speed or auto shift, review Operation and Maintenance Manual (OMM), primary steering failure warning, seat belt warning, secondary steering failure warning, Diesel Particulate Filter (DPF) regeneration filter, secondary steering energy source engaged, hour meter, retarder active	✓	
Mirrors, exterior	✓	
Mirrors, heated motorized		✓
Machine operation monitoring system: action lamp, engine oil pressure, primary steering system, left and right turn signal, high beam, coolant temperature, tachometer, parking brake, fuel level, transmission oil temperature, brake system, transmission hold, hoist control, hydraulic system, charging system, retarder, transmission fault, traction control system, check engine lamp	✓	
Radio, Bluetooth® stereo system		✓
Seats: operator – fully adjustable, air suspension, retractable lap belt; trainer – padded with retractable lap belt	✓	
Seat, heated/cooled		✓
Operator seat belt, four-point		✓
Secondary steering, electro hydraulic	✓	
Storage: cup holder, flask receptacle, under seat storage, door pocket, behind operator seat storage, coat hook	✓	
Sun visor	✓	
Tilt and telescopic steering wheel	✓	
Touchscreen display incorporating the rearview camera video feed	✓	
Window blinds		✓
Windows (tinted) opening side	✓	
Windshield wiper and washer, two speed, intermittent (front)	✓	
Window wiper and washer, two speed (rear)		✓

	Standard	Optional
TECHNOLOGY		
Cat® Detect with Stability Assist	✓	
Cat Payload monitoring system		✓
Machine Security System (MSS)		✓
Product Link™ Cellular PLE643	✓	
Product Link Dual PLE683		✓
ELECTRICAL AND LIGHTING		
Batteries (two) maintenance free	✓	
Cold weather start attachment		✓
Engine block heater		✓
Ether start		✓
Electrical system: 24-volt, 5A 24- to 12-volt converter	✓	
Flashing LED beacon		✓
Horn	✓	
Lighting systems: cab interior, two head lamps, two width marker, two reversing, work light/cab access light, two stop/tail lights, front and rear direction indicators	✓	
Main disconnect switch	✓	
Remote starting receptacle (cables not included)	✓	
Roof-mounted LED work lights		✓
POWERTRAIN		
Auto shift six-speed forward and single-speed reverse transmission	✓	
Cat C13 engine	✓	
CX31 transmission	✓	
Differentials: standard with automatic clutched inter- and cross-axle differential locks	✓	
Dual circuit oil immersed, enclosed brakes – all wheels	✓	
Retarder: engine compression brake and hydraulic	✓	
Three axle, six-wheel drive	✓	
SAFETY		
Reverse alarm	✓	
Rearview camera	✓	
ROPS/FOPS cab	✓	
GUARDS		
Crankcase	✓	
Front dump body spill guard, integral part of fabricated body	✓	
Radiator	✓	
Rear window	✓	

Standard and Optional Equipment

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

OTHER STANDARD AND OPTIONAL EQUIPMENT	Standard	Optional
Auto lube installation for automatic greasing of bearings		✓
Bare chassis (no body) standard wheel base		✓
Bare chassis (no body) long wheel base		✓
Body liners		✓
Cold weather coolant -51°C (-60°F)		✓
Exhaust heated body		✓
Fast fuel fill		✓
Fuel additive, anti-waxing		✓

OTHER STANDARD AND OPTIONAL EQUIPMENT (CONTINUED)	Standard	Optional
Mud flaps: wheel arch and body mounted with transportation tiebacks	✓	
Scissor tailgate		✓
S·O·S℠ sampling valves	✓	
Sound suppression		✓
Tires, six 750/65 R25	✓	
Vandalism protection: lockable caps	✓	
Wheel chocks		✓

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

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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AEXQ2713-02 (07-2025)
Replaces AEXQ2713-01
Build Number: 04A
(Afr-ME, Aus-NZ, Eurasia, Indonesia, Pacific Islands, S Am)