

# 745

## Articulated Truck



### Engine

Engine Model – U.S. EPA Tier 4 Final,  
EU Stage IV, Japan 2014, Korea Tier 4 Final

Gross Power – SAE J1995

Net Power – ISO 14396

Cat® C18 ACERT™

381 kW      511 hp

376 kW      504 hp

### Weights

Rated Payload      41 tonnes      45.2 tons

### Body Capacities

Heaped SAE 2:1      25 m<sup>3</sup>      32.7 yd<sup>3</sup>

745 Articulated Truck Key Features

- All new world class cab and operator environment
- Combined hoist/transmission lever
- Economy mode
- Cat Detect with Stability Assist
- Automatic Retarder Control (ARC)
- Advanced Productivity Electronic Control Strategy (APECS)
- Advanced Automatic Traction Control (AATC)
- New Touch Screen Display
- Assisted Hoisting Control
- Hill Assist
- Waiting Brake
- Machine Speed Limiting
- Cat Connect – Cat Production Measurement, Product Link™/VisionLink®

The reference to Tier 4 Final/Stage IV includes U.S. EPA Tier 4 Final, EU Stage IV, Japan 2014, as well as Korea Tier 4 Final. The reference to Tier 4 Interim/Stage IIIB will include U.S. EPA Tier 4 Interim, EU Stage IIIB, and Japan 2011 throughout the rest of this document.

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**The Cat 745 with a 25 m<sup>3</sup> (32.7 yd<sup>3</sup>) 41 tonnes (45.2 tons) capacity brings a new level of operator comfort and features to the market in addition to the durability, high productivity and lower operating costs Cat Articulated Trucks are known for.**

**The all-new operator cabin is a leap into the next generation for Articulated Trucks, providing our operators the best place to help build the future.**



## Ease of Operation

Designed for operators, by operators





## Control Layout

The new cab is designed to make all aspects of machine operation as simple as possible for every operator. The controls and gauges are easy to read and straightforward to use, allowing the operator to focus on safe machine operation while maintaining productivity.

## Combined Hoist/Transmission Lever

Unique to Cat Articulated Trucks, the combined hoist/transmission lever provides easy, intuitive control of gears and hoist functions. The new assisted hoist system gives improved control to the operator, allowing for faster cycle times and less control movements.

Offering both automatic and manual options, the system gives operators flexibility to choose their preferred method of control. When using the automatic system to tip a load, the machine neutralizes the transmission, applies the service brakes and hoists the body to maximum angle at the required engine rpm. When lowering the body this feature prevents a hard stop onto frame, eliminating shock loads and potential damage. Automatic use can reduce operator interactions by up to 50 percent depending on the site tipping procedure.

Also incorporated into the lever are waiting brake, transmission hold, machine speed limiter and parking brake selection. This gives operating a more automotive feel. No separate switch is now needed; you just push the lever into park.



## Dashboard

The newly styled and updated dash puts all controls within easy reach of the operator. It features LED illuminated rocker switches for easy use in all operating conditions. The fit and finish delivers an automotive feel with the industrial strength you would expect from Caterpillar.

## Touch Screen Display

The updated touch screen dash mounted display allows the operator to monitor and adjust various levels of machine performance and condition, as well as machine warning categories. These include configuration settings, operator and machine totals, service information, various machine status parameters, machine payload information (when fitted), stability assist, and the video feed from the rearview camera.

## Bluetooth® Stereo Connectivity

Make and receive hands free calls via the optional Bluetooth equipped stereo with clearer quality due to the quieter cab and upgraded speakers.

# Operator Environment

Improved productivity with a comfortable and confident operator

## Spacious Two-Person Cab

The large open cab with increased headroom, offers a comfortable working space for both the operator and an additional person (e.g. training purposes). The second seat is fully padded with a backrest and a wide, retractable seat belt for a secure and comfortable ride. Positioned adjacent to the operator, the seat gives the trainer a clear view of the instrument panel, controls and the road ahead.



## Increased and Improved Storage

A new large side storage box is heated or cooled by the HVAC system depending on operator preference. Twin cup holders and multiple storage spaces have also been introduced to help give operators an uncluttered workspace.

## Air Suspension Seat

The new air suspension seat gives an increased range of adjustments over previous offerings including fore/aft isolation, which dramatically reduces horizontal vibrations and jolts.

This provides a greater number of operators with the ability to tailor their seating position for a more comfortable working day. The seat is fitted with variable climate control as standard.

## Cab Atmosphere

The improved climate control system gives you the option to maintain the temperature desired by the operator. The addition of Infra Red Reflective (IRR) glass and integrated window blinds helps guard against the effects of bright sunlight.

A reduction to in-cab noise (-7 dB from previous model) contributes to a more comfortable working environment for the operator, all day, every day.



Every Tier 4 Final/Stage IV Cat engine with ACERT Technology is equipped with a combination of proven electronic, fuel, air and aftertreatment components. The right technologies fine-tuned for the right applications result in:

- All new Eco mode, which can provide an average reduction in fuel consumption of 5 percent over normal operation.
- High machine performance across all applications.
- Enhanced reliability through commonality and simplicity of design.
- Maximized uptime and reduced cost with world-class support from the Cat dealer network.
- Minimized impact of emission systems: designed to operate without requiring interaction.
- Durable designs with long life to overhaul.
- Delivering better fuel economy with minimized maintenance costs while providing the same great power and response.

### **Advanced MEUI™-C Injector**

Advanced MEUI-C injector platforms deliver increased injection pressures and more precise fuel rates. These durable injectors enhance responsiveness while controlling soot.

### **Innovative Air Management**

Cat Tier 4 Final/Stage IV engines feature innovative air-management systems that optimize airflow and enhance power, efficiency and reliability.

### **Cat NO<sub>x</sub> Reduction System (NRS)**

The NRS captures and cools a small quantity of exhaust gas, then routes it back into the combustion chamber where it drives down combustion temperatures and reduces NO<sub>x</sub> emissions.

## **Engine** Optimized performance, proven reliability



### **Aftertreatment Technologies**

The aftertreatment solution utilized for Tier 4 Final/Stage IV products is the next evolutionary step for Cat engines with ACERT Technology. To meet the additional 80 percent reduction in NO<sub>x</sub> emissions required by Tier 4 Final/Stage IV emission standards.

### **Diesel Exhaust Fluid (DEF)**

Cat engines equipped with a SCR system inject DEF into the exhaust to reduce NO<sub>x</sub> emissions.

DEF is a precisely mixed solution of 32.5 percent high purity chemical grade urea and 67.5 percent de-ionized water.

### **Engine Compression Brake**

The engine compression brake improves retarding response and increases retarding power for controlled descent of grades.



# Transmission

## Class leading transmission technology

The Cat High Density Power Shift (HDPS) nine-speed forward, two-speed reverse transmission, designed specifically for Articulated Trucks, features Advanced Productivity Electronic Control Strategy (APECS) and Electronic Clutch Pressure Control (ECPC) that deliver smooth gear changes with improved acceleration and higher productivity.

Speed hold/limiting function allows the machine speed to be limited in 1 km/h or 1 mph steps to conform to site speed restrictions.

Gearshifts are configured to maintain direct drive lock-up, and reduce dropping into converter drive. Decreasing the use of torque converter drive aids in maintaining ground speed and gradeability.

Variable gearshift points are used based on the operating conditions, which also aid in maintaining ground speed during gear changes on grades.

### **Torque Converter**

Large diameter torque converter, configured for off-highway applications, allows the higher engine power to be transmitted more efficiently to the lower power train.

# Automatic Features

## Ease of use, improved performance



### **Advanced Automatic Traction Control (AATC)**

Proactive application of the inter and cross-axle differential locks is 'on-the-go' and fully automatic. The operator does not have to think about when and where to engage either diff lock. Sensors monitor the machine and wheel speeds, enabling instant response in high rolling resistance conditions. Operation is seamless and smooth, eliminating wheel slip for maximum traction and therefore productivity.

Clutches are automatically disengaged when ground conditions allow, maximizing efficiency when steering or when on uneven ground.

AATC reduces tire and driveline abuse, eliminating lost machine efficiencies caused by improper manual operation of the differential clutches and reducing the cost of premature tire replacement.

### **Automatic Retarder Control (ARC)**

In automatic mode, use of the retarder is much easier for the operator. As with AATC a number of machine operating aspects are monitored, and if required the engine compression brake is engaged automatically. The system can help towards eliminating engine overspeed, improving safe machine operation and reducing cycle times, yet still having the flexibility of manual control if needed.

### **Assisted Dumping System**

Tipping of the dump body can be done automatically with the new Assisted Hoisting Control. Flick the new body raise/lower switch and the machine will apply the service brakes, switch the transmission to neutral and raise the body at the required engine rpm. Lowering the dump body is done the same way, flick the switch and the machine will lower the body and place it in float. Two flicks, one up, one down.



# Suspension and Braking

Performance with comfort

## Front Suspension

The three-point front suspension design provides the mechanism required to travel at speed over rough terrain and softens impact loads on structures and components. Large bore, low-pressure cylinders are purposely designed for Articulated Truck applications and offer a soft, smooth ride for the operator.

## A-Frame Construction

The front suspension uses an oscillating A-frame with a lateral tie rod to control axle sideways movement and stability.

## Rear Suspension

The rear suspension features a walking beam with Caterpillar designed rear suspension mounts, which have long life and provide a reliable, and stable ride for excellent load retention.

## Axle Enclosed Wet Brakes

All axle enclosed wet brakes provide high retarding and braking performance with improved holding on grades.

## Hill Assist

Hill assist reduces potential 'roll-back' on grades. If an operator stops the machine on a grade, when taking his foot off the service brake pedal, the machine will automatically hold the service brakes on for a number of seconds to prevent the machine from rolling backwards.

## Waiting Brake

Waiting brake applies the service brakes when neutral gear is selected, allowing quick and easy control of the machine at the load or dump area.

# Durability and Reliability

## Proven structures and components



### Front Frame

The front frame design features a large box section and wide, stiff frame beams to handle torque loads. The divergent frame design decreases stress in the hitch area and optimizes suspension geometry. The frame design makes maximum use of robotic welding for increased durability.

### Rear Frame

Twin-box construction minimizes stress concentrations and provides low weight with long service life.

### Articulating/Oscillating Hitch

The articulating hitch provides the truck with steering articulation, and the oscillation ensures all-wheel ground contact in rough terrain.

### Hitch Construction

Field proven two-piece construction features a durable cast steel head bolted to a hard wearing forged steel tube.

### Dump Body Design

The 745 has a large target area to provide consistently high load-carrying capacity. Body design aids in clean material discharge, maximizing production and avoiding carry-back.

### Output Transfer Gear (OTG)

The output transfer gear distributes drive to the tractor and trailer and includes a wet clutch differential lock for optimum traction in poor underfoot conditions.

### Service Brakes

The full power hydraulic system actuates enclosed, oil immersed, multi disc, multi plate brakes with independent front and rear circuits and accumulators. This dual-circuit, all wheel braking system provides the braking performance required to support maximum productivity.

### Parking Brake

The parking brake is located on the center axle in an elevated position, it is spring applied and hydraulically released.

# Integrated Technologies

## Monitor, manage, and enhance job site operations



### LINK Technologies

LINK technologies, like Product Link wirelessly connect you to your equipment, giving you valuable insight into how your machine or fleet is performing. The system tracks location, hours, fuel usage, productivity, idle time, and diagnostic codes through the online VisionLink user interface so you can make timely, fact-based decisions to maximize efficiency, improve productivity, and lower costs.



### PAYLOAD Technologies

PAYLOAD technologies like Cat Production Measurement bring payload weighing to the cab to help optimize job site efficiency and productivity.

Operators can view real-time load weights on the integrated display and know precisely when target is achieved, while cab-mounted external payload lights on all four corners, signal the loader operator when to stop, reducing machine overloading. Operators can track daily productivity from the cab, with quick access to truck payload weights, loads and cycle counts, and daily totals; or remotely via LINK technologies.

### Cat Detect with Stability Assist

Cat Detect with Stability Assist warns the operator if machine is approaching an unsafe angle during operation; when driving and tipping. If using the assisted hoist, the machine will stop hoisting the body and give an audible and visual warning. The system monitors angles of tractor, trailer and grade independently. This increases operator awareness of machine stability during operation. All tractor and/or trailer rollover events are logged and reported via VisionLink.

Cat Connect makes smart use of technology and services to improve your job site efficiency. Using the data from technology-equipped machines, you'll get more information and insight into your equipment and operations than ever before.

Cat Connect technologies offer improvements in these key areas:



EQUIPMENT  
MANAGEMENT

**Equipment Management** – increase uptime and reduce operating costs.



PRODUCTIVITY

**Productivity** – monitor production and manage job site efficiency.



SAFETY

**Safety** – enhance job site awareness to keep your people and equipment safe.



# Serviceability

Maximize uptime and reduce costs

## Long Service Intervals

Changes to oil change intervals, volumes and the type of oil required will help lower maintenance costs and machine downtime.

## Lubrication Points

Lubrication points are grouped in the hitch area for ease of servicing. Universal joints are lubed for life, eliminating any maintenance. An Autolube system is also optional and now includes alerts via Product Link for low grease levels.

## Service Points

Service points are mounted on the left side of the engine under the electrically raised hood:

- Engine dipstick and fill cap
- Transmission dipstick and fill cap
- Air, fuel water separator and fuel filters
- Electrically operated fuel-priming pump
- Coolant level indicator and fill cap are outside the cab

## Radiator

The radiator package is located behind the cab, which provides protection from frontal impacts and offers easy access to the inlet and outlet sides of the radiator.

## Extended Life Coolant

Extended Life Coolant extends the change interval and improves component life by reducing aluminum corrosion.

## Electrical Service Center

Located inside the cab, this service center provides a power port, diagnostic connector and Cat Data Link connector.

## Cat Data Link Connector

The Cat Data Link connector provides a plug-in using a laptop with Electronic Technician (ET) software.

## Service Access

The cab tilts to the side to provide easy access underneath, which simplifies access to the transmission, drive shafts and hydraulic pumps. Machine electrical and hydraulic interfaces are located on the external right-hand side of the cab, behind a removable body panel providing easy access.

# Complete Customer Support

A commitment to your success

## Selection

Make comparisons of the machines you are considering before you buy. Your Cat dealer can help.

## Purchase

Consider the resale value; compare productivity and day-to-day operating costs and fuel consumption.

## Operation

For the best operating techniques to increase productivity and your profit, turn to your Cat dealer for the latest training literature and trained staff.

## Maintenance

Repair option programs guarantee the cost of repairs up front. Diagnostic programs such as S.O.S<sup>SM</sup> and Technical Analysis help you avoid unscheduled repairs.

## Replacement

Repair or rebuild? Your Cat dealer can help you evaluate the costs so you can make the right choice.

## Product Support

Your local Cat dealership will be with you every step of the way with its unsurpassed worldwide parts support, trained technicians and customer support agreements.

## cat.com

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).





# Sustainability

## Making sustainable progress possible

All Cat Articulated Trucks are designed to maximize efficiency and productivity while conserving natural resources.

### Oil Volumes

The amount of both hydraulic and engine oil required has been lowered, reducing waste oil disposal.

### Air Quality

The Cat C18 ACERT engine incorporating the Cat Clean Emission Module (CEM) meets Tier 4 Final/Stage IV emission standards and has the flexibility of running on either ultra-low-sulfur diesel (ULSD, with 15 ppm sulfur or less) fuel or biodiesel blended with ULSD.

### Recycle Waste

The Caterpillar Design, Manufacturing, Assembly and Test Site at Peterlee in England recycle 98 percent of all waste produced with zero waste to landfill.

### Second Life

Cat Articulated Trucks are fully supported by the Cat Reman Service, providing same-as-new performance and reliability at a fraction of the cost of new parts, while reducing the negative impact on the environment.

# Safety

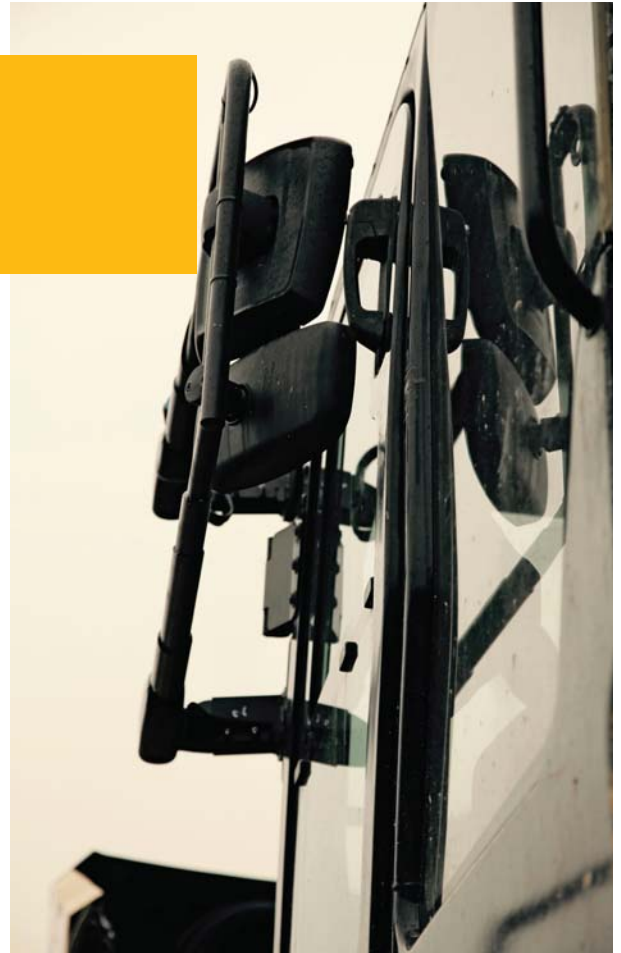
## Designed into every machine

### Product Safety

Caterpillar has been and continues to be proactive in developing machines that meet or exceed safety standards. Safety is an integral part of all machine and system designs.

### Safety Features

- Seat belt in use indicator (four-point seat belt available as an option)
- Operator presence detection (prevents gear engagement when operator is not seated)
- Additional mirror for front of machine visibility
- Body raised visual indicator
- Cab integral Roll Over Protection System (ROPS) and Falling Object Protection System (FOPS)
- Electro-hydraulic secondary steering system automatically activates in forward/reverse or when stationary if low pressure is sensed; can be manually selected for machine recovery purposes
- Extensive handrails
- External electrical system disconnect switch for easy access from outside of the machine
- Fire extinguisher in-cab mounting point
- Fully raised body locking pin
- Ground level external engine fuel cut-off switch provides easy access outside of the machine
- Heated mirrors (optional)
- In-cab emergency brake switch
- Internal and external grab handles
- LED-flashing beacon (optional)
- Maximum speed limiter
- Multiple camera compatible
- New access lights
- Rearview camera system is fitted as standard. The video feed is shown on the touch screen display when reverse gear is selected. It can also be enabled to show at all times if required.
- Reversing indicator
- Slip resistant walkways – punched steel plate
- The parking brake functions are spring applied and hydraulic released
- Cab mounted, wide angled, folding mirrors
- Cat Detect with Stability Assist



# 745 Articulated Truck Specifications

## Engine

Engine Model	Cat C18 ACERT	
Gross Power – SAE J1995	381 kW	511 hp
Net Power – SAE J1349	370 kW	496 hp
Net Power – ISO 14396	376 kW	504 hp
Bore	145 mm	5.7 in
Stroke	183 mm	7.2 in
Displacement	18.1 L	1106 in <sup>3</sup>

- The power ratings apply at rated speed of 1,700 rpm when tested under the conditions for the specified standard.
- 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 348 kW (467 hp) per the SAE reference conditions.
- The 745 meets Tier 4 Final/Stage IV emission standards.
- DEF used in Cat SCR systems must meet the requirements outlined in the International Organization for Standardization (ISO) standard 22241-1. ISO 22241-1 requirements are met by many brands of DEF, including those that carry the AdBlue or API certifications.

No Engine De-rating Required Below	3050 m	10,000 ft
Peak Engine Torque Gross (SAE J1995)	2618 N·m	1,931 lbf·ft
Peak Engine Torque Net (SAE J1349)	2558 N·m	1,887 lbf·ft
Peak Engine Torque Speed	1,200 rpm	

## Weights

Rated Payload	41 tonnes	45.2 tons
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## Body Capacities

Heaped SAE 2:1	25 m <sup>3</sup>	32.7 yd <sup>3</sup>
Struck	18.5 m <sup>3</sup>	24.2 yd <sup>3</sup>
Tailgate Heaped SAE 2:1	26.5 m <sup>3</sup>	34.7 yd <sup>3</sup>
Tailgate Struck	19.5 m <sup>3</sup>	25.5 yd <sup>3</sup>

## Transmission

Forward 1	6.1 km/h	3.8 mph
Forward 2	8.1 km/h	5 mph
Forward 3	11.2 km/h	7 mph
Forward 4	14.1 km/h	8.8 mph
Forward 5	18.7 km/h	11.6 mph
Forward 6	22.9 km/h	14.2 mph
Forward 7	31.5 km/h	19.6 mph
Forward 8	37.9 km/h	23.5 mph
Forward 9	54.8 km/h	34 mph
Reverse 1	6.4 km/h	4 mph
Reverse 2	14.6 km/h	9.1 mph

## Sound Levels

Interior Cab	72 dB(A)
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- The operator sound exposure Leq (equivalent sound pressure level) measured according to the work cycle procedures specified in ANSI/SAE J1166 OCT98 is 76 dB(A), for the cab offered by Caterpillar, when properly installed and maintained and tested with the 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 noisy environments.

# 745 Articulated Truck Specifications

## Operating Weights

Front Axle – Empty	19 738 kg	43,515 lb
Center Axle – Empty	6944 kg	15,309 lb
Rear Axle – Empty	6682 kg	14,731 lb
Total – Empty	33 363 kg	73,553 lb
Front Axle – Rated Load	5900 kg	13,007 lb
Center Axle – Rated Load	17 550 kg	38,691 lb
Rear Axle – Rated Load	17 550 kg	38,691 lb
Total – Rated Load	41 000 kg	90,390 lb
Front Axle – Loaded	25 638 kg	56,522 lb
Center Axle – Loaded	24 494 kg	54,000 lb
Rear Axle – Loaded	24 232 kg	53,422 lb
Total – Loaded	74 363 kg	163,942 lb

## Body Plate

High Strength Brinell HB450 Wear Resistant Steel		
Front	7 mm	0.28 in
Chute	14 mm	0.55 in
Side	11 mm	0.43 in
Base	14 mm	0.55 in

## Body Hoist

Raise (manual)	12 seconds
Raise (automatic)	13 seconds
Lower (manual)	10 seconds
Lower (automatic)	10 seconds

## Service Refill Capacities

Fuel Tank	550 L	145.3 gal
DEF Tank	25 L	5.3 gal
Cooling System	90 L	23.7 gal
Brake Cooling Tank	67 L	17.69 gal
Steering/Hoist Hydraulic System	140 L	36.9 gal
Engine Crankcase	52 L	13.7 gal
Transmission/OTG	75 L	19.8 gal
Final Drives (each)	5 L	1.3 gal
Axles (each)	60 L	15.8 gal

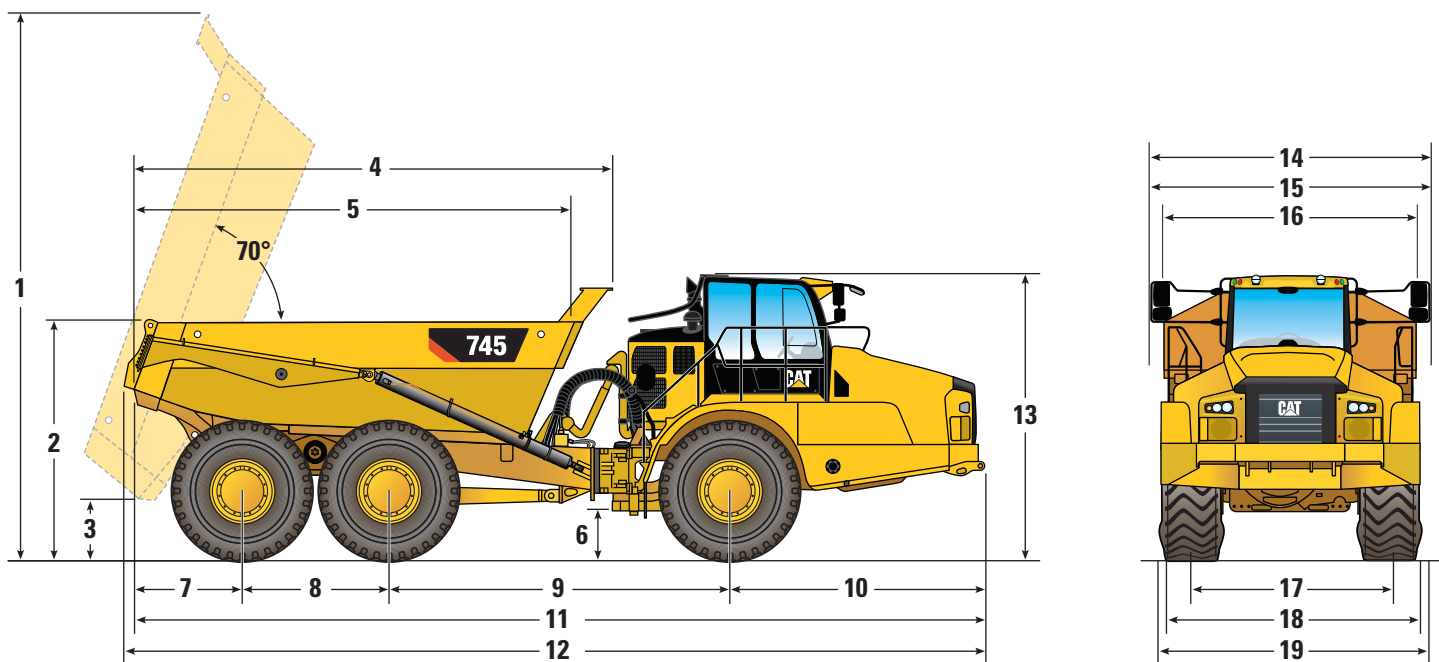
## Standards

Brakes	ISO 3450 – 2011
Cab/FOPS	ISO 3449 Level II – 2005
Cab/ROPS	ISO 3471 – 2008
Steering	ISO 5010 – 2007

# 745 Articulated Truck Specifications

## Dimensions

All dimensions are approximate.



	mm	ft/in		mm	ft/in
<b>1</b>	7310	24'0"	<b>11</b>	11 422	37'6"
<b>2</b>	3178	10'6"	<b>12**</b>	11 550	37'11"
<b>3</b>	779	2'7"	<b>13</b>	3762	12'5"
<b>4</b>	6457	21'2"	<b>14</b>	3801	12'6"
<b>5*</b>	5900	19'4"	<b>15**</b>	3774	12'5"
<b>6</b>	590	1'11"	<b>16***</b>	3422	11'3"
<b>7</b>	1448	4'9"	<b>17†</b>	2687	8'10"
<b>8</b>	1966	6'5"	<b>18††</b>	3370	11'1"
<b>9</b>	4590	15'1"	<b>19†††</b>	3500	11'6"
<b>10</b>	3418	11'3"			

\* Inside of body  
 \*\* With tailgate  
 \*\*\* Body width  
 † Track width  
 †† Over fenders  
 ††† Over tire bulge

Unladen dimensions with 29.5R25 standard tires.

# 745 Articulated Truck Specifications

## Turning Circle

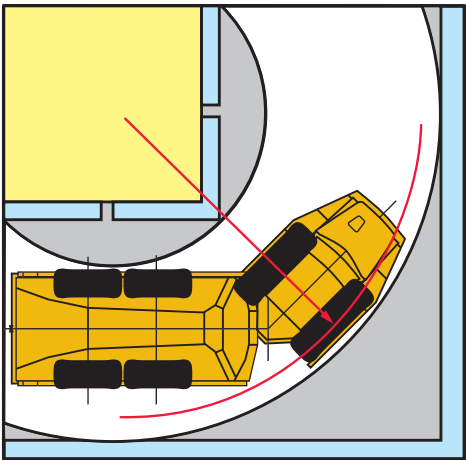
Dimensions are for machines equipped with 29.5R25 tires.

### Turning Dimensions

Steer Angle – Left/Right	45 deg	
SAE Turning Radius	8625 mm	340 in
Clearance Radius	9082 mm	356 in
Inside Radius	4413 mm	174 in
Aisle Width	5917 mm	233 in

## Steering

Lock to Lock 4.8 seconds @ 60 rpm



## Optimal Loader/Truck Pass Matching

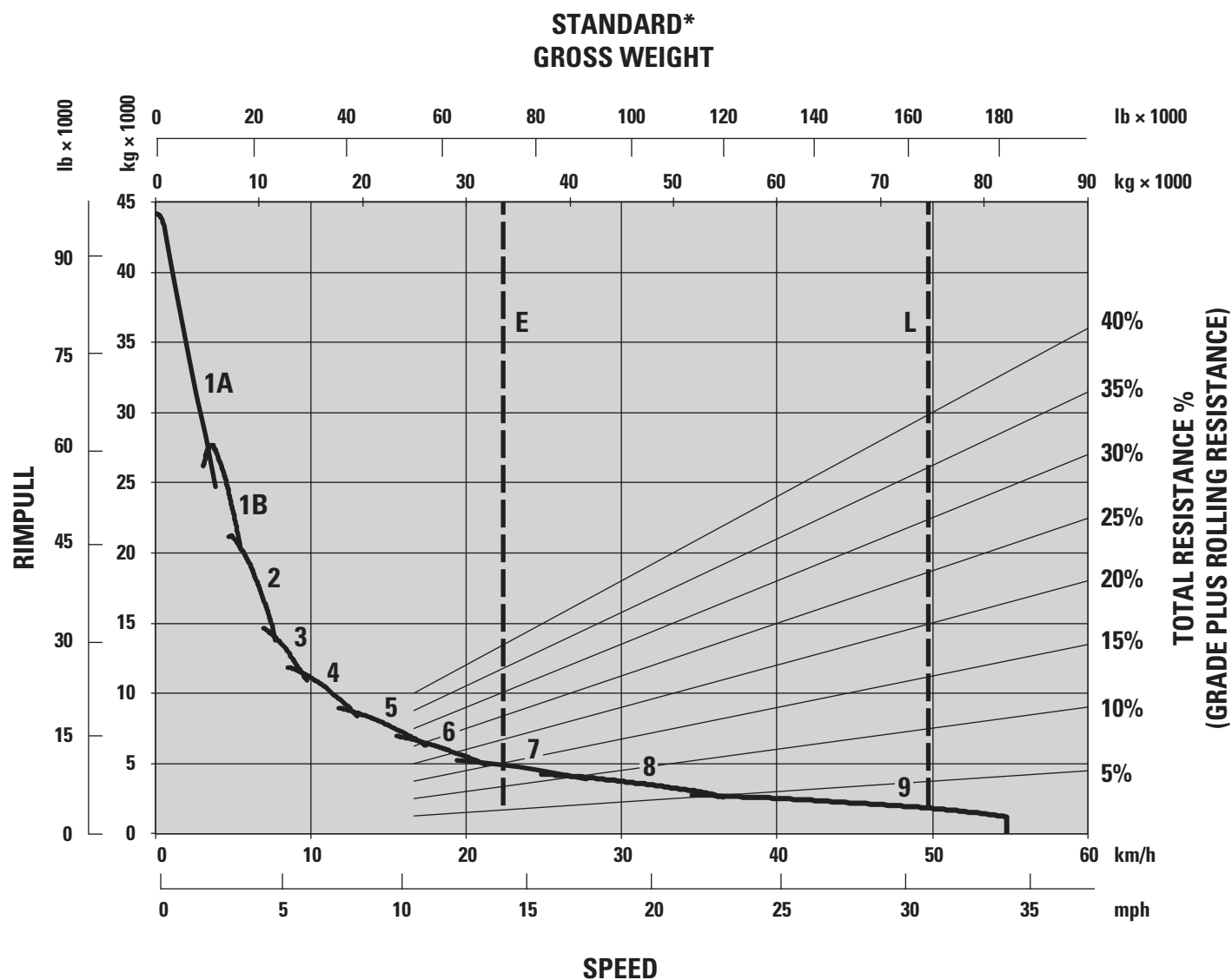
<b>Hydraulic Excavators</b>	<b>390</b>	<b>374</b>	
Passes	4	5	
<b>Wheel Loaders</b>	<b>982</b>	<b>980</b>	<b>972</b>
Passes	4	4-5	4-5

An optimum system match gives you a major productivity advantage. Having matched loading and hauling tools results in increased production and lower system costs per unit of volume moved.

# 745 Articulated Truck Specifications

## 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.



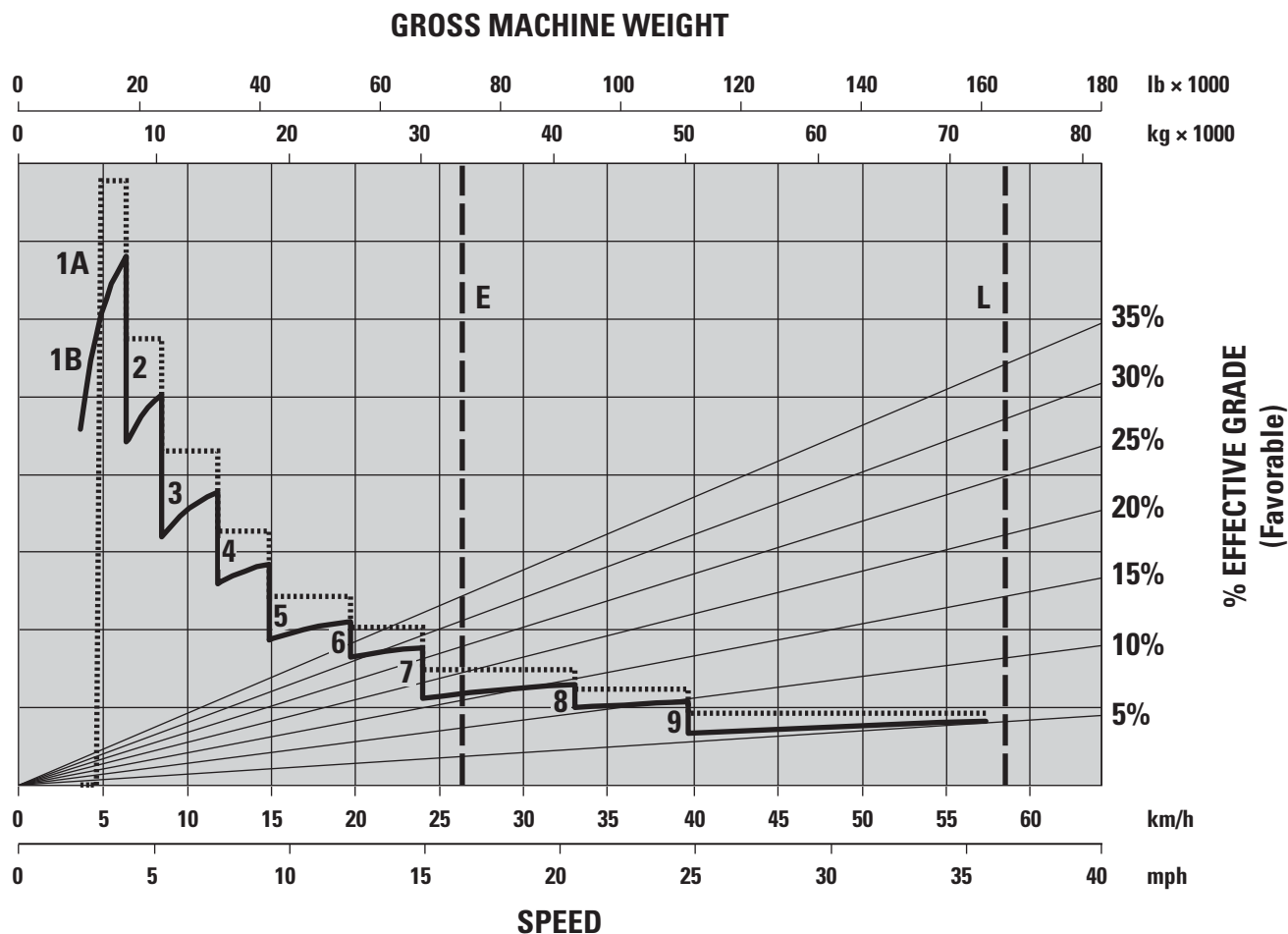
- 1A – 1st Gear (Converter Drive)
- 1B – 1st Gear (Direct Drive)
- 2 – 2nd Gear
- 3 – 3rd Gear
- 4 – 4th Gear
- 5 – 5th Gear
- 6 – 6th Gear
- 7 – 7th Gear
- 8 – 8th Gear
- 9 – 9th Gear

- E – Empty 33 600 kg (74,100 lb)
- L – Loaded 74 600 kg (164,500 lb)
- \* at sea level

# 745 Articulated Truck Specifications

## 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.



- 1A – 1st Gear (Converter Drive)
- 1B – 1st Gear (Direct Drive)
- 2 – 2nd Gear
- 3 – 3rd Gear
- 4 – 4th Gear
- 5 – 5th Gear
- 6 – 6th Gear
- 7 – 7th Gear
- 8 – 8th Gear
- 9 – 9th Gear

- E – Empty 33 600 kg (74,100 lb)
- L – Loaded 74 600 kg (164,500 lb)
- \* at sea level
- Manual
- ..... Automatic

## Standard Equipment

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

### OPERATOR ENVIRONMENT

- Air conditioning with R134A refrigerant
- 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
- Mirrors: extensive arrangement for improved visibility
- Machine operation monitoring system includes:
  - 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
- Liquid Crystal Display (LCD):
  - Alert indicator
  - Selected gear and direction
  - Speed or auto shift
  - Review Operation and Maintenance Manual (OMM)
  - Primary steering failure
  - Seat belt warning
  - Secondary steering failure
  - Diesel Particulate Filter (DPF) regeneration filter
  - Machine Security System (MSS)
  - Secondary steering energy source engaged
  - Hour meter
  - Retarder active

- Seats:
  - Fully adjustable, air suspension, heated/cooled
  - Padded trainer with lap belt
- Secondary steering – electro hydraulic
- Storage:
  - Cup holder
  - Flask receptacle
  - Under seat storage
  - Door pocket
  - Behind seat storage
  - Coat hook
- Sun visor
- Tilt and telescopic steering wheel
- Touch screen display incorporating the rearview camera video feed
- Two seat belts, operator's retractable
- Windows opening side, tinted
- Window blinds
- Windshield wiper and washer, two speed, intermittent (front)
- Windshield wiper and washer, two speed (rear)

### CAT CONNECT TECHNOLOGIES

- Product Link: PL631 or PL641 dependent on location and licensing agreement
- Cat Detect with Stability Assist

### ELECTRICAL AND LIGHTING

- Batteries (two) maintenance free
- Electrical system: 24-volt, 5A 24- to 12-volt converter
- Horn
- Lighting systems:
  - Cab interior
  - Two head lamps
  - Two width marker
  - Two reversing
  - Work light
  - Two stop/tail lights
  - Front and rear direction indicators
- Main disconnect switch
- Remote starting receptacle (cables not included)

### POWER TRAIN

- Auto shift nine-speed forward and two reverse transmission
- Cat C18 ACERT engine
- Cat Clean Emission Module (CEM) and exhaust aftertreatment package
- Differentials: standard with automatic clutched inter and cross-axle differential locks
- Dual circuit oil immersed, enclosed brakes – all wheels
- Retarder: engine compression brake
- Three axle, six-wheel drive

### SAFETY

- Reverse alarm
- Rearview camera
- ROPS/FOPS cab

### GUARDS

- Rear window
- Radiator
- Crankcase
- Axle
- Front dump body spill guard, integral part of fabricated body

### OTHER STANDARD EQUIPMENT

- Mud flaps: wheel arch and body mounted with transportation tiebacks
- S-O-S sampling valves
- Tires, six 29.5R25, radial
- Vandalism protection: lockable caps for fuel tank and hydraulic oil tank

# 745 Optional Equipment

## Optional Equipment

Optional equipment may vary. Consult your Cat dealer for details.

- Auto lube installation for automatic greasing of bearings
- Bare chassis (no body) standard wheel base
- Bare chassis (no body) long wheel base
- Body liners
- Bluetooth radio stereo system
- Cat Production Measurement payload monitoring system
- Cold weather coolant  $-51^{\circ}\text{C}$  ( $-60^{\circ}\text{F}$ )
- Cold weather start attachment
- Engine block heater
- Ether start
- Exhaust heated body
- Fast fuel fill
- Fender extension
- Flashing LED beacon
- Four-point seat belt
- Fuel additive – anti-waxing
- Heated rearview motorized mirrors
- Machine Security System (MSS)
- Product Link Elite: PLE631 (satellite), PLE641 (cellular)
- Roof mounted High Intensity Discharge (HID) work lights
- Scissor tailgate
- Sound suppression
- 875/65 R29 wide tires







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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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AEHQ8057-02 (12-2017)  
Replaces AEHQ8057-01  
Build Number: 04A

