



Cat[®] AD55B

UNDERGROUND ARTICULATED TRUCK

FEATURES:

- **One Supplier** – Caterpillar designed and manufactured major power and drive train components for reliability and performance.
- **High Performance Engine** – The Cat[®] C27 engine with ACERT™ Technology offer the perfect balance between power, robust design and economy.
- **Power Shift Transmission** – Reliable and rugged design to deliver power and efficiency for peak power train performance.
- **Engine/Power Train Integration** – Intelligent and robust electronics integrate all power and drive train components for overall optimum performance.
- **Robust Braking** – Cat oil-cooled multiple disc brakes offer exceptional, fade resistant braking in all haul road conditions.
- **Comfortable Cab** – Ergonomically designed for all-day comfort, control and productivity.
- **Truck Body** – A variety of Caterpillar designed and built bodies and liners ensure optimal performance and reliability in tough mining applications.
- **Enhanced Serviceability** – Designed with improved service points and grouped service locations to simplify maintenance and repair.

Specifications

Engine

Engine Model	Cat [®] C27 ACERT™	
Rated Power	2,000 rpm	
Gross Power – SAE J1995 (1st gear/2-7th gear)	579/600 kW	776/805 hp
Net Power – SAE J1349 (1st gear/2-7th gear)	540/560 kW	725/751 hp
Net Power – ISO 9249	540/560 kW	725/751 hp
Net Power – 80/1269/EEC	540/560 kW	725/751 hp
Bore	137.2 mm	5.4 in
Stroke	152.4 mm	6 in
Displacement	27 L	1,648 in ³

- Power ratings apply at a rated speed of 2,000 rpm when tested under the reference conditions for the specified standard.
- Ratings based on SAE J1995 standard air conditions of 25° C (77° F) and 100 kPa (29.61 Hg) barometer. Power based on fuel having API gravity of 35 at 16° C (60° F) and an LHV of 42,780 kJ/kg (18,390 BTU/lb) when engine used at 30° C (86° F).
- Engine derate will commence at an altitude of 557 m (1,827 ft).
- Compliant with U.S. Environmental Protection Agency Tier 2 emissions standards.

Operating Specifications

Nominal Payload Capacity	55 000 kg	121,254 lb
Gross Machine Operating Weight	105 000 kg	231,485 lb

Weights

Empty	50 000 kg	110,231 lb
Front Axle	34 200 kg	75,398 lb
Rear Axle	15 800 kg	34,833 lb
Loaded	105 000 kg	231,485 lb
Front Axle	52 920 kg	116,668 lb
Rear Axle	52 080 kg	114,817 lb

Weight Distribution

Empty	
Front Axle	68.4%
Rear Axle	31.6%
Loaded	
Front Axle	50.4%
Rear Axle	49.6%

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Transmission

Forward 1	6.6 km/h	4.1 mph
Forward 2	9.3 km/h	5.8 mph
Forward 3	12.5 km/h	7.5 mph
Forward 4	16.8 km/h	10.4 mph
Forward 5	22.7 km/h	14.1 mph
Forward 6	30.7 km/h	19.1 mph
Forward 7	41.5 km/h	25.8 mph
Reverse 1	8.7 km/h	5.4 mph

- Maximum travel speeds with standard 35 × 65 R33 tires.

Final Drives

Differential Ratio	3.46:1
Final Drive Ratio	5.5:1
Total Reduction Ratio	19.04:1

Body Hoist

Raise	12 Seconds
Lower	24 Seconds
Total Cycle Time	36 Seconds

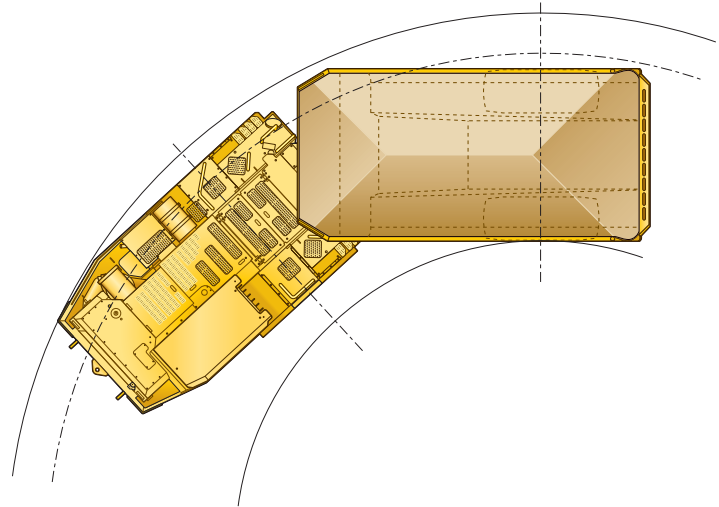
Body Capacities

Dump Body – 1	26.9 m ³	35.2 yd ³
Dump Body – 2	32.6 m ³	42.6 yd ³
Dump Body – 3	33.8 m ³	44.2 yd ³
Dump Body – 4	36.6 m ³	47.9 yd ³
Ejector Body	26.9 m ³	35.2 yd ³

- Heaped SAE 2:1.

Turning Dimensions

Outside Clearance Radius	10 005 mm	393.9 in
Inside Turning Radius	5540 mm	218.1 in
Frame Oscillation	10°	
Articulation Angle	42.5°	



Service Refill Capacities

Engine Crankcase with Filter	99 L	26.2 gal
Transmission	53 L	14 gal
Hydraulic Tank	258 L	68.2 gal
Cooling System	138 L	36.5 gal
Front Differentials and Final Drives	138 L	36.5 gal
Rear Differentials and Final Drives	138 L	36.5 gal
Fuel Tank	960 L	253.6 gal

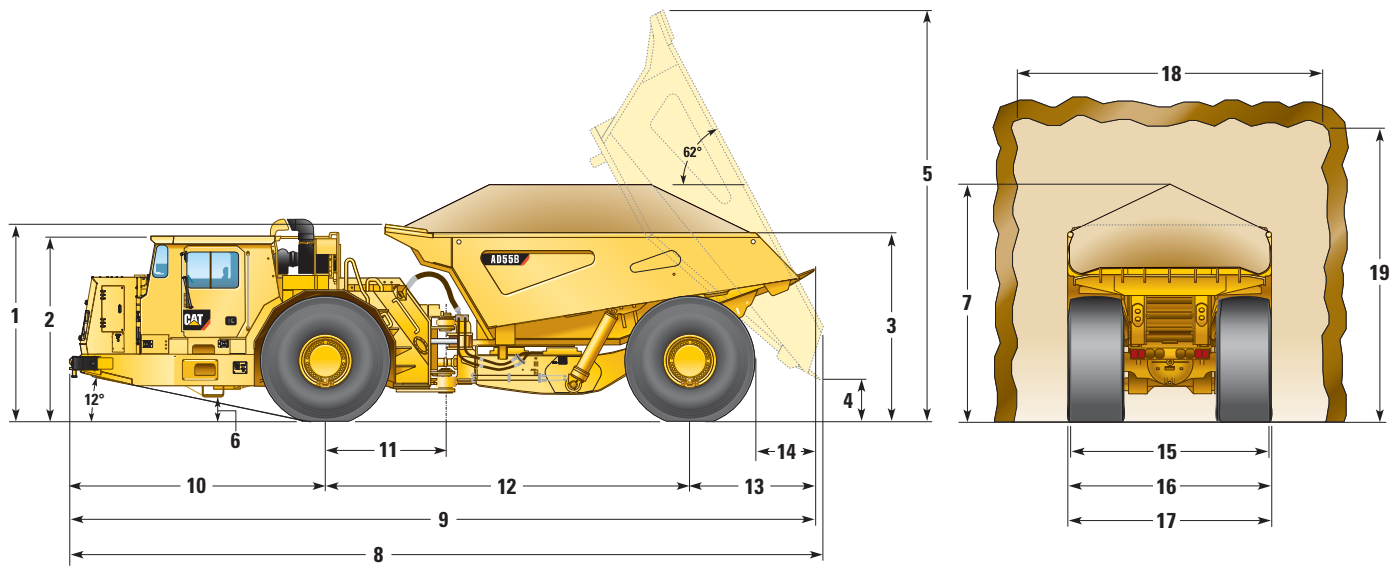
Tires

Tire Size	35 × 65 R33
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Standards

Brakes	ISO 3450, AS2958.1, CAN-CSA424.30-M90
Cab/FOPS	ISO 3449, SAE J231, AS2294.3, EN13627
Cab/ROPS	ISO 3471, SAE J1040, AS2294.2, EN13510

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Dimensions (All dimensions are approximate.)

	311-4729		308-5385		311-4727		311-4728		324-1941	
	Dump Body		Dump Body		Dump Body		Dump Body		Ejector Body	
Body Capacity	26.9 m ³	35.2 yd ³	32.6 m ³	42.6 yd ³	33.8 m ³	44.2 yd ³	36.6 m ³	47.9 yd ³	26.9 m ³	35.2 yd ³
	mm	in	mm	in	mm	in	mm	in	mm	in
1 Height – Top of Empty Body	3202	126.1	3418	134.6	3557	140.0	3560	140.2	0	0.0
2 Height – Top of ROPS	3000	118.1	3000	118.1	3000	118.1	3000	118.1	3000	118.1
3 Height – Body Loading	3045	119.9	3326	130.9	3426	134.9	3473	136.7	0	0.0
4 Height – Dump Clearance**	514	20.2	514	20.2	514	20.2	514	20.2	0	0.0
5 Height – Top of Raised Body	6969	274.4	7202	283.5	7322	288.3	7334	288.7	—	—
6 Height – Ground Clearance	393	15.5	393	15.5	393	15.5	393	15.5	393	15.5
7 Height – Top of Load (SAE 2:1)	3848	151.5	4178	164.5	4183	164.7	4333	170.6	0	0.0
8 Length – Max Body Raised	12 064	475.0	12 180	479.5	12 222	481.2	12 241	481.9	0	0.0
9 Length – Overall Body Down	12 040	474.0	12 040	474.0	12 040	474.0	12 040	474.0	0	0.0
10 Length – Front Axle to Front Bumper	4164	163.9	4164	163.9	4164	163.9	4164	163.9	4164	163.9
11 Length – Front Axle to Hitch	1920	75.6	1920	75.6	1920	75.6	1920	75.6	1920	75.6
12 Length – Wheel Base	5900	232.3	5900	232.3	5900	232.3	5900	232.3	5900	232.3
13 Length – Rear Axle to Tail	1976	77.8	1976	77.8	1976	77.8	1976	77.8	0	0.0
14 Length – Rear Wheel to Raised Body	857	33.7	857	33.7	857	33.7	857	33.7	0	0.0
15 Width – Overall Tire	3250	128.0	3250	128.0	3250	128.0	3250	128.0	3250	128.0
16 Width – Machine with Body	3346	131.7	3480	137.0	3480	137.0	3480	137.0	0	0.0
17 Width – Machine without Body	3346	131.7	3346	131.7	3346	131.7	3346	131.7	0	0.0
18 Recommended Clearance Width*	5000	196.9	5000	196.9	5000	196.9	5000	196.9	5000	196.9
19 Recommended Clearance Height*	5000	196.9	5000	196.9	5000	196.9	5000	196.9	5000	196.9

* Clearance dimensions are for reference only.

** Measurement taken with tailgate down for ejector body.

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STANDARD EQUIPMENT

ELECTRICAL

- Alarm, back-up
- Alternator, 95 amp
- Batteries, maintenance free
- Battery disconnect switch-ground level
- Brake and tail lights
- Cat Electronic Monitoring System (Cat EMS)
- Corrosive protection spray
- Diagnostic connector
- Engine shutdown switch
- Headlights with dimmer switch
- Jump start receptacle
- Rear work light (cab mounted)
- Reversing lights
- Starting and charging system (24-volt)
- Turn signal indicators

OPERATOR ENVIRONMENT

- Cab pressurizer
- Rear view mirrors
- Radio ready
- ROPS/FOPS cab with air conditioning
- Storage compartment
- Suspension seat with retractable seat belt
- Tilt/telescopic steering wheel
- Trainer/passenger seat and seat belt
- Windshield wiper and washer

POWER TRAIN

- All wheel disc brakes
- Automatic retarder control
- Auto shift transmission 7 speed forward/1 speed reverse
- Control throttle shifting
- 12 cylinder C27 ACERT™ ATAAC diesel engine
- Long life coolant
- Parking brakes (four wheels)
- Programmable gear blockout with body up
- Programmable ground speed limiting
- Torque converter with automatic lockup

OTHER STANDARD EQUIPMENT

- Articulated and oscillated hitch
- Belly guards
- Centralized lubrication points
- Dump body (26.9 m³ – 35.2 yd³)
- Exhaust catalytic converter/muffler
- Exhaust covers
- Firewall
- Frame lifting lugs
- Front and rear tow pin
- Front axle suspension
- Oil sample adapters
- Residual brake pressure switch
- Tires – 35/65 R33 VSNT radial tires
- Body up alarm

OPTIONAL EQUIPMENT

- Bodies
 - Dump, (32.6 m³ – 42.6 yd³)
 - Dump, (33.8 m³ – 44.1 yd³)
 - Dump, (36.6 m³ – 47.9 yd³)
 - Ejector, (26.9 m³ – 35.2 yd³)
 - Ejector, (29.4 m³ – 38.5 yd³)
 - Body liners, heavy duty
- Color camera and monitoring system
- EAM (Electronic Access Module)
- Engine shutdown on fire system activation
- Fast fill system
 - Coolant
 - Engine
 - Fuel
 - Hydraulic
 - Transmission
- Fire extinguisher, hand held
- Front rubber bumpers
- ID numbers for rims
- Idle timer
- Isolation switches
- Onboard fire system, 65 L
- Retractable visor group
- Seat covers
- Secondary steering system
- Spare rim
- TPMS (Truck Payload Measurement System)
- TPMS remote display payload indicator

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AEHQ6390 (08-11)

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