



Cat[®] AD55

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[®] C18 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 [®] C18 ACERT™	
Rated Power	2,000 rpm	
Gross Power – SAE J1995	439 kW	589 hp
Net Power – SAE J1349	414 kW	555 hp
Net Power – ISO 9249	414 kW	555 hp
Net Power – 80/1269/EEC	414 kW	555 hp
Bore	145 mm	5.7 in
Stroke	183 mm	7.2 in
Displacement	18.1 L	1,104.5 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).
- Compliant with U.S. Environmental Protection Agency Tier 3 as standard.

Operating Specifications

Nominal Payload Capacity	55 000 kg	121,254 lb
Gross Machine Operating Weight	102 000 kg	226,871 lb

Weights

Empty	47 000 kg	103,617 lb
Front Axle	31 300 kg	69,004 lb
Rear Axle	15 700 kg	34,612 lb
Loaded	102 000 kg	226,871 lb
Front Axle	48 202 kg	106,267 lb
Rear Axle	53 798 kg	118,604 lb

Weight Distribution

Empty	
Front Axle	66%
Rear Axle	34%
Loaded	
Front Axle	47%
Rear Axle	53%

AD55 Underground Articulated Truck

Transmission

Forward 1	7.0 km/h	4.4 mph
Forward 2	9.6 km/h	5.9 mph
Forward 3	13.0 km/h	8.1 mph
Forward 4	17.5 km/h	10.8 mph
Forward 5	23.7 km/h	14.7 mph
Forward 6	31.9 km/h	19.8 mph
Forward 7	43.3 km/h	26.9 mph
Reverse 1	6.8 km/h	4.2 mph
Reverse 2	9.2 km/h	5.7 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

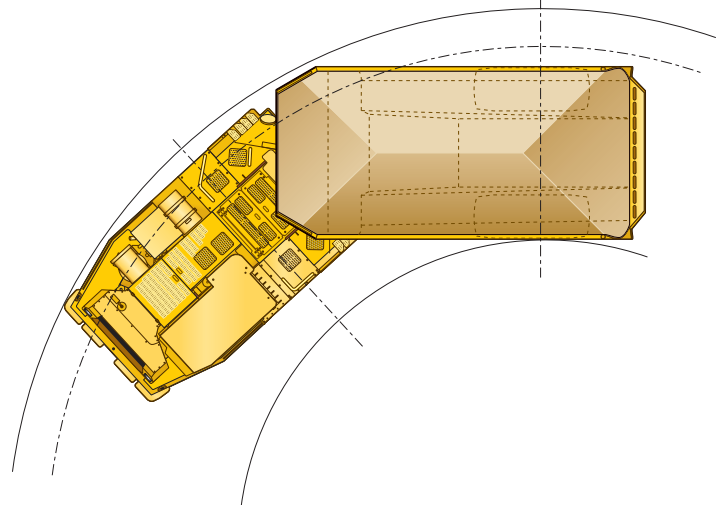
Body Capacities

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

- Heaped SAE 2:1.

Turning Dimensions

Outside Clearance Radius	9885 mm	389.2 in
Inside Turning Radius	5540 mm	218.1 in
Frame Oscillation	10°	
Articulation Angle	42.5°	



Service Refill Capacities

Engine Crankcase with Filter	64 L	16.9 gal
Transmission	53 L	14 gal
Hydraulic Tank	258 L	68.2 gal
Cooling System	75 L	19.8 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

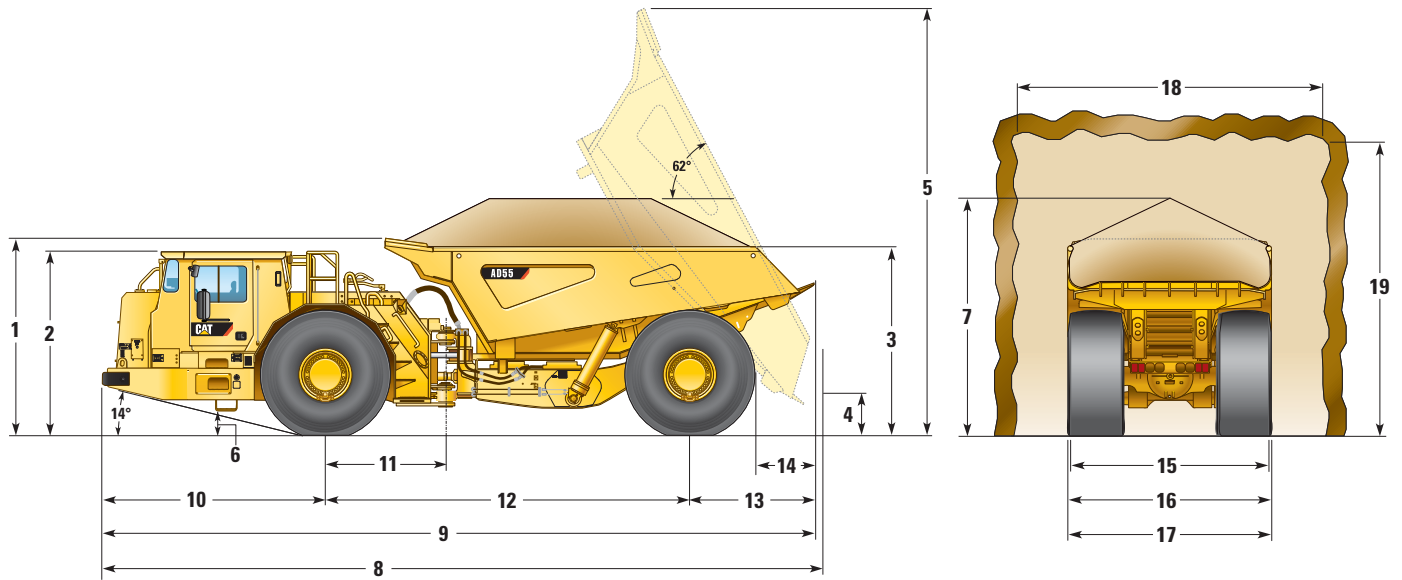
Tires

Tire Size	35 × 65 R33
-----------	-------------

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

AD55 Underground Articulated Truck



Dimensions (All dimensions are approximate.)

	311-4729		308-5385		311-4727		311-4728	
	Dump Body		Dump Body		Dump Body		Dump 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
	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
2 Height – Top of ROPS	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
4 Height – Dump Clearance	514	20.2	514	20.2	514	20.2	514	20.2
5 Height – Top of Raised Body	6969	274.4	7202	283.5	7322	288.3	7334	288.7
6 Height – Ground Clearance	391	15.4	391	15.4	391	15.4	391	15.4
7 Height – Top of Load (SAE 2:1)	3848	151.5	4178	164.5	4183	164.7	4333	170.6
8 Length – Max Body Raised	11 547	454.6	11 663	459.2	11 705	460.8	11 724	461.6
9 Length – Overall Body Down	11 523	453.6	11 523	453.6	11 523	453.6	11 523	453.6
10 Length – Front Axle to Front Bumper	3647	143.6	3647	143.6	3647	143.6	3647	143.6
11 Length – Front Axle to Hitch	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
13 Length – Rear Axle to Tail	1976	77.8	1976	77.8	1976	77.8	1976	77.8
14 Length – Rear Wheel to Raised Body	856	33.7	856	33.7	856	33.7	856	33.7
15 Width – Overall Tire	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
17 Width – Machine without Body	3346	131.7	3346	131.7	3346	131.7	3346	131.7
18 Recommended Clearance Width*	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

* Clearance dimensions are for reference only.

AD55 Underground Articulated Truck

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/2 speed reverse
- Control throttle shifting
- 6 Cylinder C18 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
- Secondary steering system
- 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)
 - Body liners, heavy duty
- Color camera and monitoring system
- EAM (Electronic Access Module)
- Fast fill system
 - Coolant
 - Engine
 - Fuel
 - Hydraulic
 - Transmission
- Fire extinguisher, hand held
- ID numbers for rims
- Idle timer
- Onboard fire system, 65 L
- Retractable visor group
- Seat covers
- Spare rim
- TPMS (Truck Payload Measurement System)
- TPMS remote display payload indicator

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

AEHQ6653 (02-12)

© 2012 Caterpillar
All Rights Reserved
Printed in U.S.A.

Materials and specifications are subject to change without notice. Featured machines in photos may include additional equipment. See your Cat dealer for available options.

CAT, CATERPILLAR, SAFETY.CAT.COM, their respective logos, "Caterpillar Yellow" and the "Power Edge" trade dress, as well as corporate and product identity used herein, are trademarks of Caterpillar and may not be used without permission.

