

Product Specifications For AD45



Engine

Engine Model	Cat® C18
Engine Power - EU Stage V Engine - ISO 14396:2002	598 hp
Engine Power - Tier 3 Engine - ISO 14396:2002	581 hp
Engine Power - VR Engine - ISO 14396:2002	581 hp
Bore	5.7 in
Stroke	7.2 in
Displacement	1104.53 in ³
Note (1)	Power ratings apply at a rated speed of 2,000 rpm when tested under the reference conditions for the specified standard.
Note (2)	All rating conditions are based on ISO/TR14396:2002, inlet air standard conditions with a total barometric pressure of 100 kPa (29.5 in Hg), with a vapor pressure of 1 kPa (0.295 in Hg), and 25° C (77° F). Performance measured using fuel to EPA specifications in 40 CFR Part 1065 and EU specifications in Directive 97/68/EC with a density of 0.845-0.850 kg/L @ 15° C (7.05-7.09 lb/gal @ 59° F) and fuel inlet temperature 40° C (104° F).
Note (3)	Minimal engine derating* required up to 3048 m (10,000 ft) @ rated speed for Stage V engines, 2700 m (8,858 ft) for Tier 3/Stage IIIA equivalent engines and 3505 m (11,500 ft) for Tier 2/Stage II equivalent VR engines.
Note (4)	Optional Ventilation Reduction Package available.
Note (5)	Optional engine with emissions equivalent to Tier 3 and Stage IIIA is also available.

Note (6) Optional engine available that meets U.S. EPA Tier 4 Final and EU Stage V emission standards.

Note (7) * < 5 %

Operating Specifications

Nominal Payload Capacity	99208 lb
Gross Machine Mass	196765 lb
Shipping Mass (Stage V Engine Model)	96225 lb
Shipping Mass (Other Engine Models)	94415 lb
Body Capacities	18.0-25.1 m ³ (23.5-32.8 yd ³)

Weights (Stage V Engine Model)

Operating Mass	91285 lb
Operating Mass - Front Axle	64565 lb
Operating Mass - Rear Axle	26720 lb
Operating Mass + Rated Payload	190495 lb
Operating Mass + Rated Payload - Front Axle	89235 lb
Operating Mass + Rated Payload - Rear Axle	101260 lb

Weights (Other Engine Models)

Operating Mass	88320 lb
Operating Mass - Front Axle	61225 lb
Operating Mass - Rear Axle	27095 lb

Operating Mass + Rated Payload	187530 lb
Operating Mass + Rated Payload - Front Axle	85355 lb
Operating Mass + Rated Payload - Rear Axle	102175 lb

Weight Distribution (Stage V Engine Model)

Empty - Front Axle	70.7%
Empty - Rear Axle	29.3%
Loaded - Front Axle	46.8%
Loaded - Rear Axle	53.2%

Weight Distribution (Other Engine Models)

Empty - Front Axle	69.3%
Empty - Rear Axle	30.7%
Loaded - Front Axle	45.5%
Loaded - Rear Axle	54.5%

Body Hoist (Stage V Engine Model)

Raise	15 Seconds
Lower	21 Seconds
Total Cycle Time	36 Seconds

Body Hoist (Other Engine Models)

Raise	14 Seconds
Lower	21 Seconds

Total Cycle Time

35 Seconds

Body Capacities

Dump Body - 1	23.6 yd ³
Dump Body - 2 - Standard	27.9 yd ³
Dump Body - 3	32.8 yd ³
Ejector Body	29.9 yd ³
Note	Heaped SAE 2:1.

Turning Dimensions

Outside Clearance Radius*	371 in
Inside Clearance Radius*	209 in
Frame Oscillation	10°
Articulation Angle	42.5°
Note	*Clearance dimensions are for reference only.

Transmission

Forward - 1	4.4 mile/h
Forward - 2	5.9 mile/h
Forward - 3	8 mile/h
Forward - 4	10.8 mile/h
Forward - 5	14.6 mile/h
Forward - 6	19.7 mile/h

Forward - 7	26.4 mile/h
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Reverse - 1	4.2 mile/h
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Reverse - 2	5.6 mile/h
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Note	Maximum travel speeds with standard 29.5 × R29 tires.
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Service Refill Capacities

Engine Crankcase - With Filter	16.9 gal (US)
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Transmission	15.9 gal (US)
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Hydraulic Tank	70.3 gal (US)
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Cooling System	22.5 gal (US)
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Front Differential and Final Drives	20.3 gal (US)
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Rear Differential and Final Drives	21.9 gal (US)
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Fuel Tank	201.8 gal (US)
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Tires

Tire Size	29.5 × R29
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Standards

Standards	ROPS/FOPS Certified Cab
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Final Drives

Differential Ratio	3.46:1
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Final Drive Ratio	5.65:1
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Total Reduction Ratio	19.55:1
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AD45 Standard Equipment

ELECTRICAL

12V power supply in cab

Alternator, 95-amp

Auxiliary start receptacle

Battery disconnect switch, ground level

Circuit breaker, 80-amp

Corrosive protection spray

Diagnostic connector

Electric starting, 24V

Engine shutdown switch, ground level

- Front left hand side

Lighting

- Headlights with dimmer switch, LED

- Brake and tail lights

- Rear work light (cab mounted), LED

- Reversing lights, LED

Low maintenance batteries

Reversing alarm

Starting and charging system

OPERATOR ENVIRONMENT

Cat Electronic Monitoring System (Cat EMS)

Electric horns

Gauges

- Engine coolant temperature

- Transmission coolant temperature

- Hydraulic oil temperature

- Fuel level

- Speedometer

- Tachometer

Indicator lights

- Alert warning light

- Body up position warning

- High beam

- Residual brake pressure warning

- Retarder application

- Turn signal

Low hydraulic level warning

Open operator station ROPS/FOPS structure

Operator presence system (auto park brake)

Rearview mirrors

Suspension seat Cat Comfort TLV2 with retractable seat belt

Trainer/passenger seat and seat belt

Tilt/telescopic steering wheel

Turn signal indicators

POWER TRAIN

Cat C18 ATAAC diesel engine, 6-cylinder
Automatic brake retarder control
Auto shift transmission 7 speed forward/2 speed reverse
Control throttle shifting
Engine air intake precleaner
Electric fuel priming pump
Exhaust, turbo compartment shielding
Four wheel drive
Long life coolant
Programmable ground speed limiting
Programmable gear block out with tray up
Radiator, cross flow; Radiator cap manual release
Secondary steering system
SAFR™ full hydraulic enclosed wet, multiple-disc brakes, oil cooled
Torque converter, standard with automatic lockup

OTHER STANDARD EQUIPMENT

Body, dump, (21.3 m³, 27.9 yd³)
Catalytic exhaust purifier/muffler group
Centralized lubrication points
Decals, international picto graphics
Dual fuel tanks
Engine and transmission belly guards
Fenders, front, rear flaps
Fire wall
Fuel system manual shut off tap
Front axle suspension
Frame lifting lugs
Front and rear tow pin
Front rubber bumpers
Gauges, brake pressure
Hand hold (access on/off top deck)
Hitch, articulated and oscillated
Operation and Maintenance Manual – English and other applicable local languages to select
S·O·S port
– Coolant
– Engine oil
– Hydraulic oil
– Transmission oil
Swing out radiator grill
Tires and rims: A tire must be selected from the mandatory attachments section of the machine price list.
Base machine price includes a standard tubeless rim allowance only.

AD45 Optional Equipment

OPTIONAL EQUIPMENT

Battery shutdown

- Ground level isolation, in cab isolation switch
- Ground level isolation, engine shutdown switch
- Ground level isolation, in cab isolation, engine shutdown switch

Body dump

- Body (18.0 m³, 23.5 yd³)
- Body (25.1 m³, 32.8 yd³)

Body ejector

- Ejector (22.9 m³, 30.0 yd³)

Body liners, impact and/or wear

- 10 mm (0.4"), body, dump (18.0 m³, 23.5 yd³)
- 10 mm (0.4"), body, dump (21.3 m³, 27.9 yd³)
- 10 mm (0.4"), body, dump (25.1 m³, 32.8 yd³)
- 10 mm (0.4"), body, ejector (22.9 m³, 30.0 yd³)

Body wear plate, external

- 16 mm (0.62"), body, dump (18.0 m³, 23.5 yd³)
- 16 mm (0.62"), body, dump (21.3 m³, 27.9 yd³)
- 16 mm (0.62"), body, dump (25.1 m³, 32.8 yd³)

Camera

- Color rear facing
- Color loading

Cover, anti vandalism for shipping

Engine options

- Engine, Stage V
- Engine, Ventilation Reduction (VR)
- Equivalent to Tier 3
- After-treatment options (for use with VR Engine only)

DPF (Flow Through) Filter

Fast fill system

- Coolant
- Engine oil
- Fuel (dual tanks)
- Hydraulic oil
- Transmission oil

Fire suppression system

- Ansul, wet

Fluids

- Arctic fuel
- Arctic coolant

Handrail Extension

Lubrication system

- Automatic, dump or ejector body
- Centralized, ejector body

Mine transfer

- Mine transfer ready front frame (tack welded)
- Mine transfer ready dump body (tack welded)
- Mine transfer ready ejector body (tack welded)

Operators station ROPS/FOPS enclosed

- Air conditioning
- Cab pressurizer and filter
- Dome light
- Heater
- Radio ready compartment for radio and speakers
- Sun visor
- Window, sliding cab door

Park brake switch engagement

- Push to apply
- Pull to apply

Payload

- Truck Payload Measurement System (TPMS)

Reflective tape

Rims

- Rim identification numbering
- Spare, tubeless

Seat

- Suspension seat Cat Comfort TLV2, vinyl
- Suspension seat tee, mechanical

Seat cover

- Tee and Cat Comfort TLV2
- Seat cover, companion

Service tools

- Collet jacking bolts, dump or ejector
- Diagnostics box
- Hoist cylinder supports (for body removal)
- Brake wear gauge
- Reference parts manual for additional tooling available

Switches

- Engine shutdown, fire suppression activation
- Idle timer
- Engine shutdown, fire suppression activation/idle timer

Technology

- Product Link Elite (PLE) system

Tire arrangements

- Tire, 29.5 × R29 VSNT Bridgestone
- Tire, 29.5 × R29 VSDL Bridgestone

Torque converter, high altitude, 3000 m (9,842 ft) and up

NOTE: Not all features are available in all regions. See your Cat dealer for more information.