

VOLVO ARTICULATED HAULER

A25D, A30D



VOLVO

THE VOLVO A25D AND A30D IN DETAIL

Volvo's articulated haulers are equipped with a well-matched drivetrain for optimal use of engine power, torque and rimpull. Correctly matched and Volvo-designed drivetrain components, specifically developed for hauler applications, provide outstanding performance, high productivity, low fuel consumption and ensure long machine life.

Serviceability

- 1 No daily or weekly service.**
The Contronic information system monitors all fluid levels, minimizing daily and weekly service times. Time to next service and the status of vital vehicle systems is shown to the operator on a display in the instrument panel.
- 2 Excellent serviceability**
Swing Down Front Service Platform with access ladder to remote filter bank, located in front of engine. Grouped engine filters and remote mounted drains reduce service time. Large, 90° opening hood for total engine access.

Productivity and Performance

- 3 High Performance Low Emission Engine**
The Volvo inline 6-cylinder, direct injected electronically controlled, turbocharged and intercooled 4-stroke diesel engine generates high torque at low rpm for quick response and low exhaust emissions that meet existing requirements.
- 4 High Capacity Cooling System**
Power and fuel saving, hydraulically driven, side mounted variable speed fan consumes power only when needed.
- 5 Brakes and Retarder**
Dual-circuit, dry-disc service brakes on all wheels for maximum safety. An easy to use, variable hydraulic transmission retarder reduces service brake wear and operating cost.
- 6 Volvo Drive Train**
Correctly matched Volvo-designed components, specifically developed for hauler applications. Low power losses and long service life.
- 7 Purpose-built dropbox**
Optimized rimpull and speed in all operating conditions. Good ground clearance.
- 8 Volvo's unique Self-Compensating Hydro-Mechanical Steering**
Easy high-speed driving and steering accuracy promoting productivity. Fast acting, powerful steering with 3,4 turns lock-to-lock for slow speed maneuverability in rough conditions.
- 9 State-of-the-art Hydraulic System**
Variable displacement piston pumps consume power only as required. One ground-dependent piston pump for secondary steering mounted on the dropbox.
- 10 Rotating Hitch**
Rotating hitch and articulated steering provides good traction, off-road mobility and less stress on the frames in tough applications. High-positioned hitch provides superior clearance and stability.
- 11 Heavy Duty Axles**
Purpose built Volvo design with fully floating axle shafts, planetary type hub reductions and 100% dog clutch type diff-lock.

- 12 6x4 or 6x6 with Five Operating Modes**
Five easy to use drive combinations for every type of operating condition, increases off-road mobility, reduces fuel consumption, driveline and tire wear. Operator-selectable on the move
- 13 High strength steel 400 HB body**
Flat plate design with high chute and tipping joint with 70° or greater dump angle promotes load retention and ejection
- 14 Maintenance Free Suspensions**
Front axle has independent wheel movement via a 3-point mounting system, consisting of rubber springs and shock absorbers.
Rear bogie beam is straddle mounted with two A-frames, gives large wheel movement, low frame stress and keeps the body level, retaining the load. Low pivot point enhances stability.
- 15 Volvo Load&Dump brake**
The Volvo patented "Load and Dump brake" function maximizes ergonomics and enhance productivity. When positioning the articulated hauler for loading or dumping, the operator only need to presses a single button to automatically apply the trailer brakes and shifting the transmission to neutral.

Low operating cost

All main components for our haulers are developed in-house by Volvo, including the drivetrain, frame, cab, electronics and software. This generates results: higher productivity, higher reliability and service friendliness. All working together to reduce operating cost.



Operator Comfort and Safety

16 Excellent Operator Environment

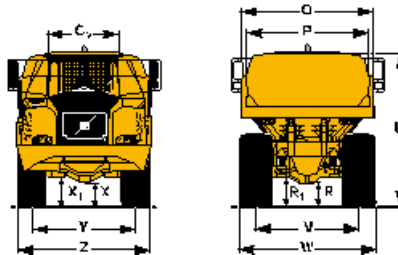
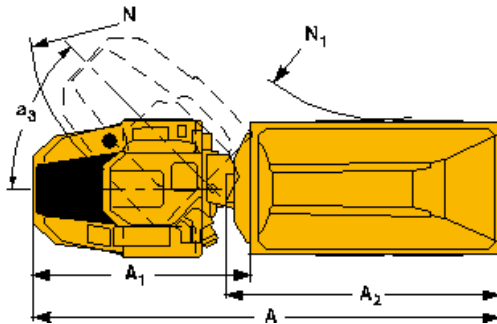
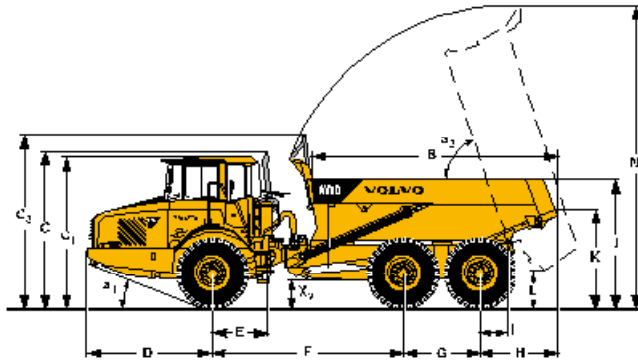
The Volvo cab is a safe, comfortable, efficient and ROPS/FOPS certified operator environment, ergonomically designed for high operator comfort and excellent unobstructed wide angle forward view. Wide threshold-free door opening and ergonomic cab entrance. Operator positioned above the front axle and in the center of the machine, together with the spacious and comfortable cab contributes to high productivity from the beginning to the end of the shift.

Ergonomically positioned controls, air conditioning, adjustable operators seat with retractable seat belt and tilt/telescopic steering wheel for reduced operator fatigue and high safety. Filtered fresh air, four-speed fan and pressurized cab to maintain a clean operating environment

17 Operator Communication system

The user-friendly operator's communication system provides simple and easy-to-understand information. All vital machine functions are constantly monitored and specific system information is displayed if a problem occurs. Service technicians can increase their diagnostic efficiency by using the Contronic service display or Matris software to download operating information stored in the Contronic system.

SPECIFICATIONS



Load Capacity		
	A25D	A30D
Standard Body		
Load capacity	24 000 kg 26.5 sh tn	28 000 kg 31.0 sh tn
Body, struck	11,7 m ³ 15.3 yd ³	13,6 m ³ 17.8 yd ³
Body, heaped	15,0 m ³ 19.6 yd ³	17,5 m ³ 22.9 yd ³
With underhung tailgate		
Body, struck	12,0 m ³ 15.7 yd ³	13,8 m ³ 18 yd ³
Body, heaped	15,3 m ³ 20 yd ³	18,0 m ³ 23.5 yd ³
With overhung tailgate		
Body, struck	12,1 m ³ 15.8 yd ³	14,0 m ³ 18.3 yd ³
Body, heaped	15,6 m ³ 20.4 yd ³	18,1 m ³ 23.7 yd ³
With over and under hung tailgate		
Body, struck	12,1 m ³ 15.8 yd ³	--
Body, heaped	15,6 m ³ 20.4 yd ³	--

Body volume according to SAE 2:1

Weights		
	A25D	A30D
Tires	23,5R25	750/65R25
Operating weight unloaded		
Front	12 160 kg 26 808 lb	12 500 kg 27 557 lb
Rear	9 400 kg 20 723 lb	10 560 kg 23 280 lb
Total	21 560 kg 47 531 lb	23 060 kg 50 838 lb
Payload	24 000 kg 52 910 lb	28 000 kg 61 729 lb
Total weight		
Front	14 140 kg 31 173 lb	14 990 kg 33 047 lb
Rear	31 420 kg 69 269 lb	36 070 kg 79 520 lb
Total	45 560 kg 100 442 lb	51 060 kg 112 568 lb

Operating weight includes all fluids and operator

Pos	Metric (mm)		Imperial (Feet)	
	A25D	A30D	A25D	A30D
A	10 220	10 297	33'6"	33'9"
A ₁	4 954	4 954	16'3"	16'3"
A ₂	5 764	6 002	18'11"	19'8"
B	5 152	5 339	16'11"	17'6"
C	3 428	3 428	11'3"	11'3"
C ₁	3 318	3 318	10'11"	10'11"
C ₂	1 768	1 768	5'10"	5'10"
C ₃	3 760	3 834	12'4"	12'7"
D	2 764	2 764	9'1"	9'1"
E	1 210	1 210	4'0"	4'0"
F	4 175	4 175	13'8"	13'8"
G	1 670	1 670	5'6"	5'6"
H	1 610	1 688	5'3"	5'6"
I	608	608	2'0"	2'0"
J	2 778	2 856	9'1"	9'4"
K	2 102	2 181	6'11"	7'2"
L	677	686	2'3"	2'3"
M	6 559	6 592	21'6"	21'8"
N	8 105	8 105	26'7"	26'7"
N ₁	4 079	4 037	13'5"	13'3"
O	2 700	2 900	8'10"	9'6"
P	2 490	2 706	8'2"	8'11"
R	512	513	1'8"	1'8"
R ₁	634	635	2'1"	2'1"
U	3 257	3 310	10'8"	10'10"
V	2 258	2 216	7'5"	7'3"
V*	-----	2 258	-----	7'5"
W	2 859	2 941	9'5"	9'8"
W*	-----	2 859	-----	9'5"
X	456	456	1'6"	1'6"
X ₁	581	582	1'11"	1'11"
X ₂	659	659	2'2"	2'2"
Y	2 258	2 216	7'5"	7'3"
Y*	-----	2 258	-----	7'5"
Z	2 859	2 941	9'5"	9'8"
Z*	-----	2 859	-----	9'5"
a ₁	23,5°	23,5°	-----	-----
a ₂	74°	70°	-----	-----
a ₃	45°	45°	-----	-----

A25D: Unloaded machine with 23,5R25

A30D: Unloaded machine with 750/65R25

*) A30D with optional 23,5R25 tires

Body material		
Front	8 mm	(0.31")
Sides	12 mm	(0.47")
Bottom	14 mm	(0.55")
Chute	14 mm	(0.55")
Yield strength	1000 N/mm ²	(145000 psi)
Tensile strength	1250 N/mm ²	(181000 psi)
Hardness	400 HB	

Ground Pressure				
	A25D		A30D	
Tires	23,5R25		750/65R25	23,5R25
Unloaded				
Front	123 kPa	17.8 psi	101 kPa	14.6 psi
Rear	48 kPa	7 psi	43 kPa	6.2 psi
Loaded				
Front	144 kPa	20.8 psi	121 kPa	17.5 psi
Rear	159 kPa	23 psi	146 kPa	21.2 psi

At 15% sinkage of unloaded radius and specified weights.

Fill capacities	
Crankcase	40 l (10.6 US gal)
Fuel tank	400 l (106.0 US gal)
Cooling system	115 l (30.4 US gal)
Transmission total	41 l (11.0 US gal)
Dropbox	8,5 l (2.2 US gal)
Axles, front/ rear	33 l (8.7 US gal)
First bogie axle	34 l (9.0 US gal)
Hydraulic tank	175 l (46.0 US gal)

Speed		
Forward	1	8 km/h (5.0 mph)
	2	12 km/h (7.5 mph)
	3	22 km/h (13.6 mph)
	4	31 km/h (19.3 mph)
	5	40 km/h (24.8 mph)
	6	53 km/h (32.9 mph)
Reverse	1	8 km/h (5.0 mph)
	2	13 km/h (8.1 mph)

Engine

A25D	
Make	Volvo
Model	D9 - AAEE2*/ AAEBE2*/ BAAE3*/ BAE3**
Max power at	35 r/s (2 100 r/min)
SAE J1995 Gross	224 kW (305 hp)
Flywheel power at	35 r/s (2 100 r/min)
SAE J1349 Net, DIN 6271***	223 kW (303 hp)
Max torque at	20 r/s (1 200 r/min)
SAE J1995 Gross	1 700 Nm (1 254 lb ft)
SAE J1349 Net, DIN 6271***	1 689 Nm (1 246 lb ft)
Displacement total	9,4 l (574 in ³)

With fan operating at full speed, the flywheel power is 210 kW (285 hp) and maximum torque is 1 589 Nm (1 172 lb ft) which corresponds to DIN 70020.

A30D	
Make	Volvo
Model	D9 - AAEE2*/ AAEBE2*/ BAAE3*/ BAE3**
Max power at	31,7 r/s (1 900 r/min)
SAE J1995 Gross	252 kW (343 hp)
Flywheel power at	31,7 r/s (1 900 r/min)
SAE J1349 Net, DIN 6271***	251 kW (341 hp)
Max torque at	20 r/s (1 200 r/min)
SAE J1995 Gross	1 700 Nm (1 254 lb ft)
SAE J1349 Net, DIN 6271***	1 689 Nm (1 246 lb ft)
Displacement total	9,4 l (574 in ³)

With fan operating at full speed, the flywheel power is 238 kW (324 hp) and maximum torque is 1 589 Nm (1 172 lb ft) which corresponds to DIN 70020.

*) Meets Europe (EU) Stage II
 **) Meets Europe (EU) Stage IIIA
 ***) with fan at normal speed

Engine brake: Exhaust retarder.

Electrical System

All cables, sockets and pins are identified. Cables are enclosed in plastic conduits and secured to main frame. Halogen lights. Prewired for options. Connectors meet IP67 standard for water-proofing as necessary.

Voltage	24 V	
Battery capacity	2x170 Ah	
Alternator	2,24 kW (80 A)	
Starter motor	7 kW (9,5 hp)	

Drivetrain

	A25D	A30D
Torque converter	2,37:1	2,37:1
Transmission, Volvo	PT 1562	PT 1562
Dropbox	IL 1	IL 1
Axles, Volvo	AH 56	AH 64

Brake system

Dual circuit system with air-hydraulic dry disc brakes on all wheels. Meets ISO 3450 and SAE J1473 at total machine weight.

Circuit division: One circuit for front axle and one for bogie axles.

Parking brake: Spring-applied disc brake on the propeller shaft, designed to hold a loaded machine on a grade of up to 18%. When the parking brake is applied, the longitudinal differential is locked.

Compressor: Gear-driven by engine transmission.

Retarder: Hydraulic, infinitely variable, integrated in transmission.

Steering system

Cylinders: Two double-acting steering cylinders.

Supplementary steering: Complies with ISO 5010 at total machine weight.

Steering angle: 3,4 steering wheel turns lock-to-lock, ±45°

Cab

ROPS/FOPS approved: according to (ISO 3471, SAE J1040) / (ISO 3449, SAE J231) standards.

Sound level in cab: ISO 6396 74 dB (A)

Hydraulic system

Pumps: Four engine-driven variable displacement load-sensing piston pumps driven by the flywheel PTO. One ground-dependent piston pump for secondary steering mounted on the dropbox.

Filter: One fibreglass filter with magnetic core.

Pump capacity per pump:

Engine-dependent 146 l/min (38,6 US gpm)

Ground-dependent 122 l/min (32,2 US gpm)

at shaft speed 46,2 r/s (2 772 r/min)

Working pressure 25 MPa (3626 psi)

Body/ Dumping

Load and dump brake: With the engine running, the service brakes on the rear axle are applied and transmission is shifted to neutral.

Dumping Cylinders: Two single stage double acting cylinders.

	A25D	A30D
Tipping angle	74°	70°
Tipping time with load	12 s	12 s
Lowering time	9 s	9 s

EQUIPMENT

The Volvo A25D – A30D Standard Equipment

Safety

ROPS/ FOPS protected cab
Service platform for ease of service
Anti-slip material on hood and fenders
Hazard lights
Horn
Protective grille for rear window
Rear-view mirrors
Retractable 3-inch safety belt
Secondary steering
Steering joint locking assembly
Dump body lock
Windshield wipers with interval function
Windshield washers
Handrails on fenders

Comfort

Tilt/telescopic steering wheel
Cab heater with filtered fresh air and defroster
Overhead console for radio
Sun visor
Tinted glass
Can holder /storage tray
Cigarette lighter
Ashtray
Space for lunch cooler
Storage box
Instructor seat with seat belt

Engine

Direct injected, electronically controlled
Turbocharged, intercooled
Remote oil drain plug and hose
Remote oil filters, for ease of access
Preheater for easier cold starts
Exhaust retarder

Electrical system

80 A alternator
Battery disconnect switch
Extra 24 V socket for lunch cooler
Lights:

- Headlights
- Parking lights
- Direction indicators
- Rear lights
- Back-up lights
- Brake lights
- Cab lighting
- Instrument lighting

Operator information interface

Gauges:

- Speedometer
- Tachometer
- Brake pressure
- Fuel
- Transmission oil temperature

Warning lights grouped and easy to read

Central warning (3 levels) for all vital functions

Central positioned information display:

- Automatic pre-start checks
- Operation information, easy-to-find menu
- Troubleshooting diagnostics
- Hour meter
- Clock
- Machine settings

Drivetrain

Automatic transmission
Torque converter with automatic lock-up
Dropbox, single-stage
Hydraulic variable retarder
6x4 or 6x6 operator selectable drive modes
100% longitudinal differential lock
100% differential locks in all axles

Brakes

Air-hydraulic disc brakes
Two circuit brake system
Parking brake on prop shaft

Body

Body prepared for exhaust heating
Load and Dump brake

Tires

A25D: 23,5R25
A30D: 750/65R25

Other

Air drier

The Volvo A25D – A30D Optional Equipment

(Standard on certain markets)

Safety

Fire-extinguisher and first aid kit

Service and maintenance

Tool kit with tire inflation unit
Electrical hood opening

Engine

Extra air cleaner, heavy-duty
Electric engine heater (120V or 240V)
External emergency engine stop
Delayed engine stop

Electrical

Work lights, roof mounted
Work lights, rear-facing, fender-mounted
Rotating beacon, collapsible mount
Back-up alarm
Rear vision system
Anti-theft system (prevents engine start)
Headlights for left-hand traffic

Cab

Heated, mechanically or air suspended, fully adjustable operator's seat
Electrically heated rear-view mirrors
Air conditioning
Radio installation kit
Radio
Cable kit for cab heater (120V or 240V)
Window tint film

Body

Body exhaust heating kit

A25D

Underhung tailgate, link operated
Overhung tailgate, link operated (only in combination with underhung gate)
Overhung tailgate, wire operated

A30D

Underhung tailgate, link operated
Overhung tailgate, wire operated

Wear plates

Extra front spillguard
Upper side extension, 200 mm

Tires

A30D: 23,5R25

External

Rear mudflaps

Other

Synthetic hydraulic oil (biologically degradable)
Arctic oil kit
Toolbox
Towing Hitch



Volvo Construction Equipment is different. It's designed, built and supported in a different way. That difference comes from our 170-year engineering heritage. A heritage of thinking first about the people who actually use the machines. About how to help them be safer, more comfortable, more productive. About the environment we all share. The result of that thinking is a growing range of machines and a global support network dedicated to helping you do more. People around the world are proud to use Volvo. And we're proud of what makes Volvo different – **More care. Built in.**



All products are not available in all markets. Under our policy of continuous improvement, we reserve the right to change specifications and design without prior notice. The illustrations do not necessarily show the standard version of the machine.

VOLVO

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