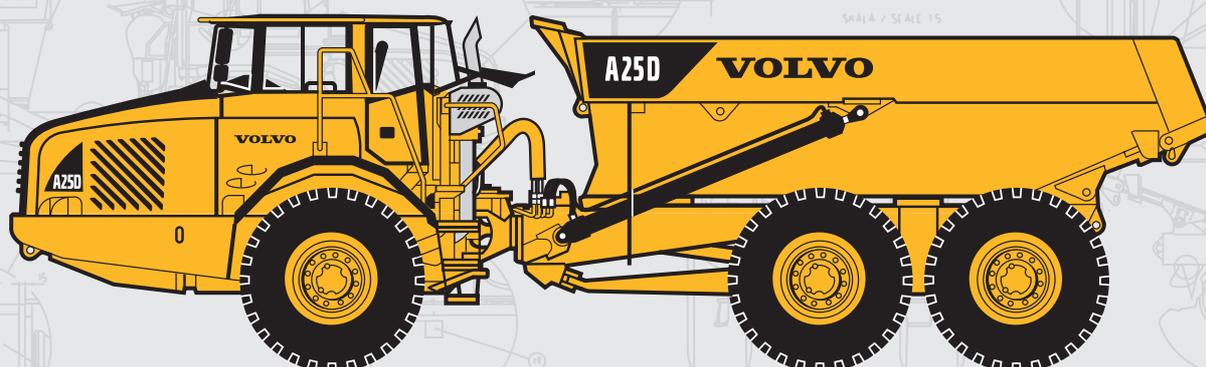


**VOLVO ARTICULATED HAULER**

# A25D/A30D

**LOW PROFILE**



• **Engine output:**

**A25D:**

SAE J1995, Gross 228 kW (310 hp)

SAE J1349, Net 227 kW (309 hp)

**A30D:**

SAE J1995, Gross 242 kW (329 hp)

SAE J1349, Net 241 kW (328 hp)

• **Body volume, heaped:**

**A25D:** 15,0 m<sup>3</sup>

**A30D:** 17,5 m<sup>3</sup>

• **Load capacity:**

**A25D:** 24,0 t

**A30D:** 28,0 t

- **Volvo cab**, designed for high operator visibility, ergonomics and comfort. Low profile cab for underground operation.
- **Reduced maintenance time**, no daily or weekly grease points.
- **Electronic Operator's Communication System**
- **Volvo high performance – low emission**, electronically controlled direct injected, turbocharged, intercooled diesel engine.
- **Fully automatic planetary transmission**, electronically controlled.
- **Hydraulic retarder** integral in transmission.
- **Dropbox with longitudinal differential lock**
- **100% lock-up differentials**. One longitudinal and three transverse differential locks.
- **Front axle with three-point suspension**.
- **Volvo terrain bogie**, individually oscillating axles and high ground clearance.
- **Low profile body**, for underground operation
- **Volvo Load & Dump Brake**.

**VOLVO**

# The A25D - A30D Low Profile in detail

## Service

The computerized 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.

**Service accessibility:** Fold-down front grill with access ladder to remote filter bank, located in front of engine.

Large, 90° opening hood for total engine access.

Remote drain hoses and swing-out radiator for easy cleaning.

## Fill capacities

Crankcase.....	38 l
Fuel tank .....	400 l
Cooling system .....	71 l
Transmission total .....	41 l
Dropbox.....	8,5 l
Axles, front/ rear .....	33 l
First bogie axle.....	34 l
Hydraulic tank .....	175 l

## Engine

Volvo inline 6-cylinder, direct injected electronically controlled, turbocharged, intercooled 4-stroke low-emission diesel engine with wet replaceable cylinder liners.

**Fan:** Hydrostatically driven, thermostatically controlled variable speed radiator fan consuming power only when needed.

**Engine brake:** Exhaust retarder.

## A25D

Make, model .....	Volvo D10BACE2*
Make, model .....	Volvo D10BADE2**
Max power at .....	33,3 r/s (2 000 r/min)
SAE J1995 Gross .....	228 kW (310 hp)
Flywheel power at .....	33,3 r/s (2 000 r/min)
SAE J1349 Net, DIN 6271*** .....	227 kW (309 hp)
Max torque at .....	22,5 r/s (1 350 r/min)
SAE J1995 Gross .....	1 375 Nm
SAE J1349 Net, DIN 6271*** .....	1 365 Nm
Displacement total .....	9,6 l

With fan operating at full speed, the flywheel power is 214 kW (291 hp) and maximum torque is 1 276 Nm which corresponds to DIN 70020.

## A30D

Make, model .....	Volvo D10BAAE2*
Make, model .....	Volvo D10BABE2**
Max power at .....	33,3 r/s (2 000 r/min)
SAE J1995 Gross .....	242 kW (329 hp)
Flywheel power at .....	33,3 r/s (2 000 r/min)
SAE J1349 Net, DIN 6271*** .....	241 kW (328 hp)
Max torque at .....	22,5 r/s (1 350 r/min)
SAE J1995 Gross .....	1 420 Nm
SAE J1349 Net, DIN 6271*** .....	1 410 Nm
Displacement total .....	9,6 l

With fan operating at full speed, the flywheel power is 228 kW (310 hp) and maximum torque is 1 321 Nm which corresponds to DIN 70020.

\*) Meets US (EPA) step 2, California (CARB) step 2 and Europe (EU) step 2.

\*\*) Meets Europe (EU) step 2.

\*\*) with fan at normal speed.

## 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 waterproofing as necessary.

Voltage .....	24 V
Battery capacity .....	2x170 Ah
Alternator.....	1,54 kW (55 A)
Starter motor.....	6,6 kW (9 hp)

## Drivetrain

Volvo components, specifically designed for hauler applications.

**Torque converter:** Single-stage with free-wheeling stator and automatic lock-up on all gears.

**Transmission:** Fully automatic planetary transmission with six forward gears and two reverse gears, with a built-in variable hydraulic retarder.

**Dropbox:** Volvo design, single-stage.

**Axles:** Volvo design with fully floating axle shafts and planetary type hub reductions.

**Differential locks:** One longitudinal and three transverse with 100% lock-up function, operator selectable on the move.

**Configuration:** 6x4 or 6x6 drive, operator selectable on the move.

	A25D	A30D
Torque converter.....	2,37:1	2,37:1
Transmission, Volvo .....	PT 1560	PT 1560
Dropbox.....	IL 1	IL 1
Axles, Volvo .....	AH 56	AH 64

## Speed:

Forward	
1 .....	8 km/h
2 .....	12 km/h
3 .....	22 km/h
4 .....	31 km/h
5 .....	40 km/h
6 .....	53 km/h
Reverse	
1 .....	8 km/h
2 .....	13 km/h

## Brake system

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

**Service brakes:** Dry discs on all wheels.

**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 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.

Total retarding capability including transmission retarder and exhaust retarder, see graph.

## Steering system

Hydromechanical self-compensating articulated steering for safe and accurate high-speed hauling. Fast acting, low effort steering with 3,4 turns lock-to-lock for slow speed maneuverability.

**Cylinders:** Two double-acting steering cylinders.

**Secondary steering:** Meets ISO 5010 at total machine weight.

**Steering angle:** ±45°

## Suspension

Volvo's unique maintenance-free 3-point suspension system. The axles are suspended at three points, which results in independent movement needed in rough terrain.

**Front axle:** One hollow rubber spring on each side. A cross stay provides the stability. Two shock absorbers on each side.

**Bogie:** Volvo's unique terrain bogie permits long suspension travel and independent wheel movement, keeps the body level, retaining the load.

## Cab

Volvo cab, ergonomically designed for high operator comfort and excellent visibility. Wide threshold-free door opening and ergonomic cab entrance. Insulating rubber pads to reduce vibrations. Tilt/ telescopic steering wheel. Overhead console for radio and storage. Dash-mounted Operator's Communication System. Storage bins. Low profile cab reducing the total machine height.

**Standard:** ROPS/FOPS tested and approved. (ISO 3471, SAE J1040) / (ISO 3449, SAE J231) standards.

**Heater and defroster:** Filtered fresh air, four-speed fan and pressurized cab to maintain a clean operating environment. Multi-level air outlets and separate defroster vents for all windows.

**Operator's seat:** Adjustable operator's seat with flameproof upholstery. Retractable seat belt.

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

## Hydraulic system

Load-sensing, variable displacement, piston pumps, consume power only when needed.

**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.....	140 l/min
Ground-dependent .....	142 l/min
at shaft speed .....	52,5 r/s (3 150 r/min)
Working pressure .....	25 MPa

Weights			Ground Pressure				Load Capacity			
Operating weight includes all fluids and operator			At 15% sinkage of unloaded radius and specified weights.				Body volume according to SAE 2:1			
	A25D	A30D		A25D	A30D			A25D	A30D	
Tires	23,5R25 650/65R25	750/65R25	Tires	23,5R25 650/65R25	750/65R25	23,5R25				
<b>Operating weight unloaded</b>			<b>Unloaded</b>			<b>Std. Body</b>				
Front	12 160 kg	12 500 kg	Front	123 kPa	101 kPa	127 kPa	Load capacity	24 000 kg	28 000 kg	
Rear	9 400 kg	10 560 kg	Rear	48 kPa	43 kPa	54 kPa	Body, struck	11,7 m <sup>3</sup>	13,6 m <sup>3</sup>	
Total	21 560 kg	23 060 kg	<b>Loaded</b>			Body, heaped			15,0 m <sup>3</sup>	17,5 m <sup>3</sup>
Payload	24 000 kg	28 000 kg	Front	144 kPa	121 kPa	152 kPa	<b>With underhung tailgate</b>			
<b>Total weight</b>			Rear	159 kPa	146 kPa	183 kPa	Body, struck	12,0 m <sup>3</sup>	13,8 m <sup>3</sup>	
Front	14 140 kg	14 990 kg					Body, heaped	15,3 m <sup>3</sup>	18,0 m <sup>3</sup>	
Rear	31 420 kg	36 070 kg				<b>With overhung tailgate</b>				
Total	45 560 kg	51 060 kg				Body, struck			12,1 m <sup>3</sup>	14,0 m <sup>3</sup>
						Body, heaped			15,6 m <sup>3</sup>	18,1 m <sup>3</sup>
						<b>With over and under hung tailgate</b>				
						Body, struck			12,1 m <sup>3</sup>	--
						Body, heaped			15,6 m <sup>3</sup>	--



### Body

Low profile body for underground operation.

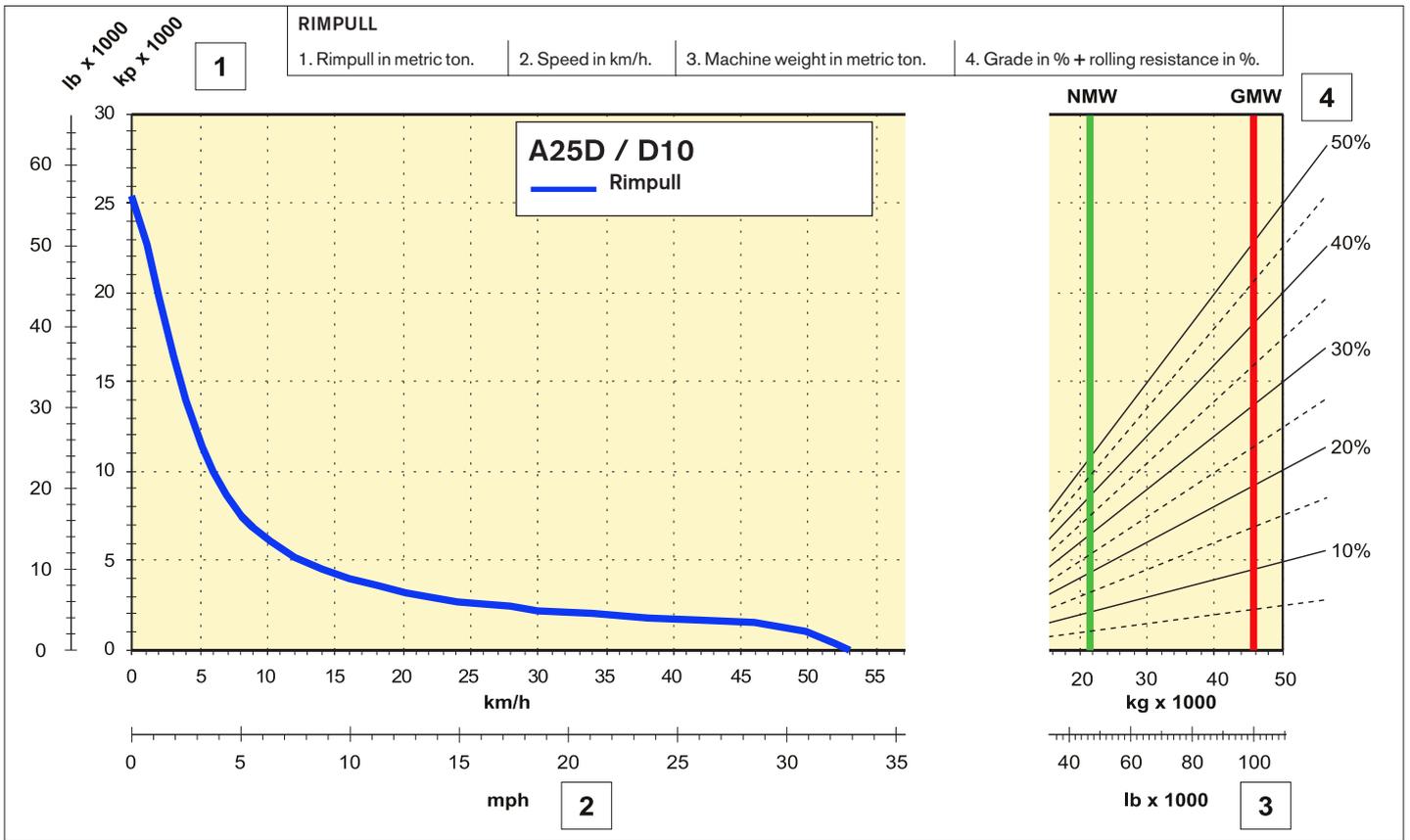
**Load and dump brake:** With the engine running, the service brakes on bogie axles are applied and transmission is shifted to neutral.

**Body material:** Hardened and tempered steel body, flat plate design made of high-strength steel.

Front .....	8 mm
Sides .....	12 mm
Bottom .....	14 mm
Chute .....	14 mm
Yield strength .....	900 N/mm <sup>2</sup>
Tensile strength .....	1 250 N/mm <sup>2</sup>
Hardness min .....	360 HB

**Dump Cylinders:** Two single-stage double-acting cylinders.

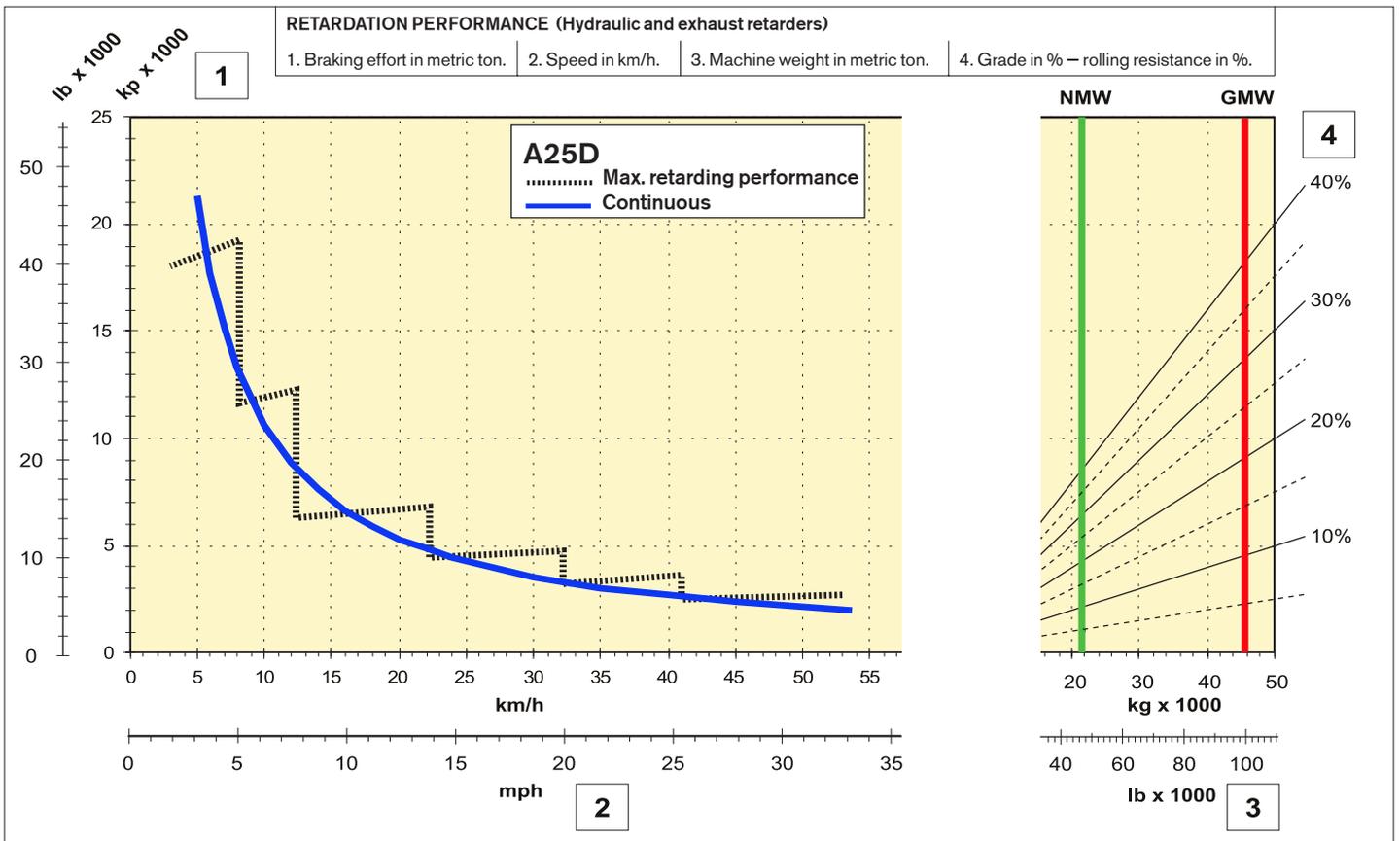
	A25D	A30D
Tipping angle .....	74°	70°
Tipping time with load .....	12 s	12 s
Lowering time .....	9 s	9 s

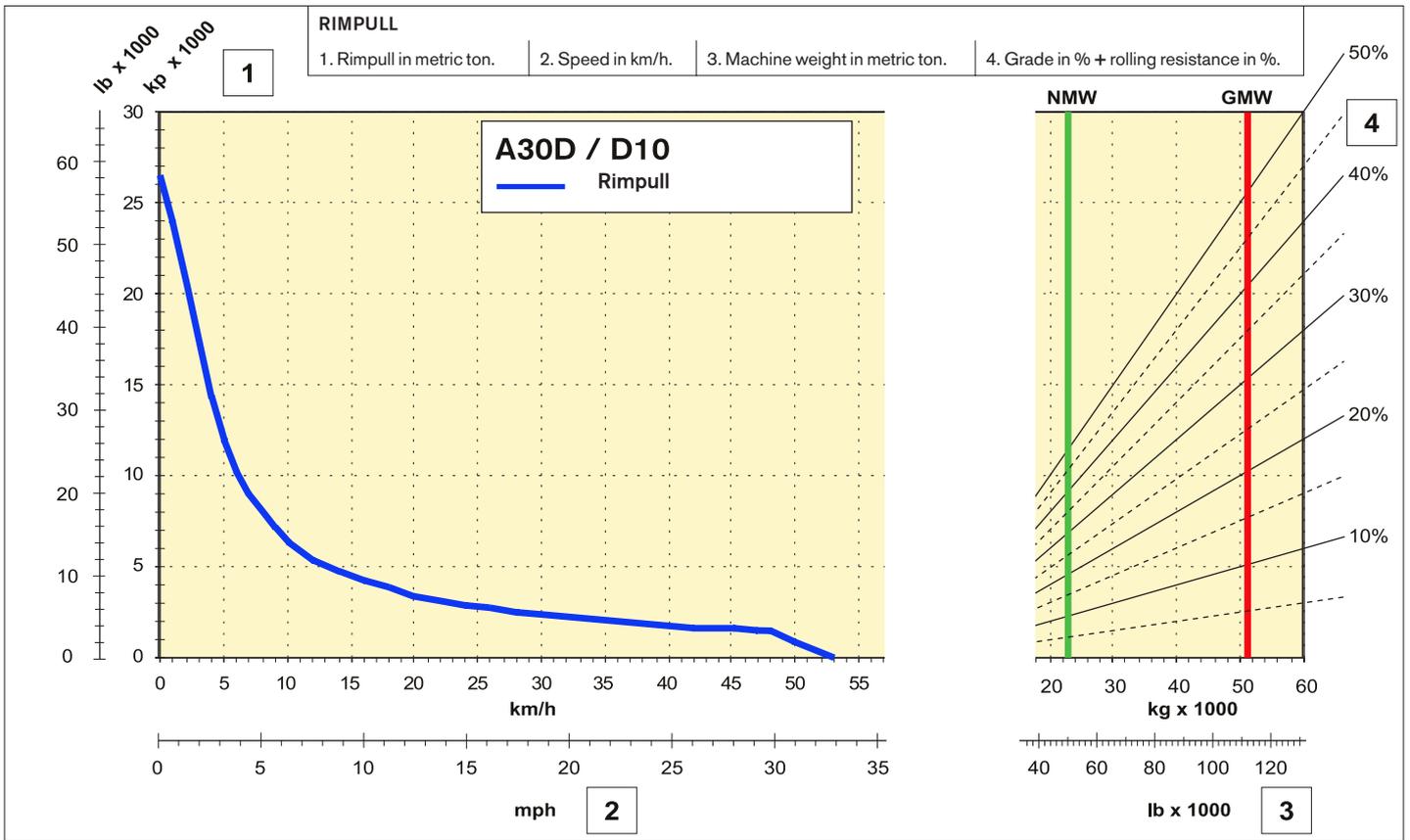


**Instructions**

Diagonal lines represent total resistance (grade % ± rolling resistance %). Charts based on 0% rolling resistance, standard tires and gearing, unless otherwise stated.

- Find the diagonal line with the appropriate total resistance on the right-hand edge of the chart.
- Follow the diagonal line downward until it intersects the actual machine weight line, NMW or GMW.
- Draw a new line horizontally to the left from the point of intersection until the rimpull or retardation curve.
- Read down for vehicle speed.

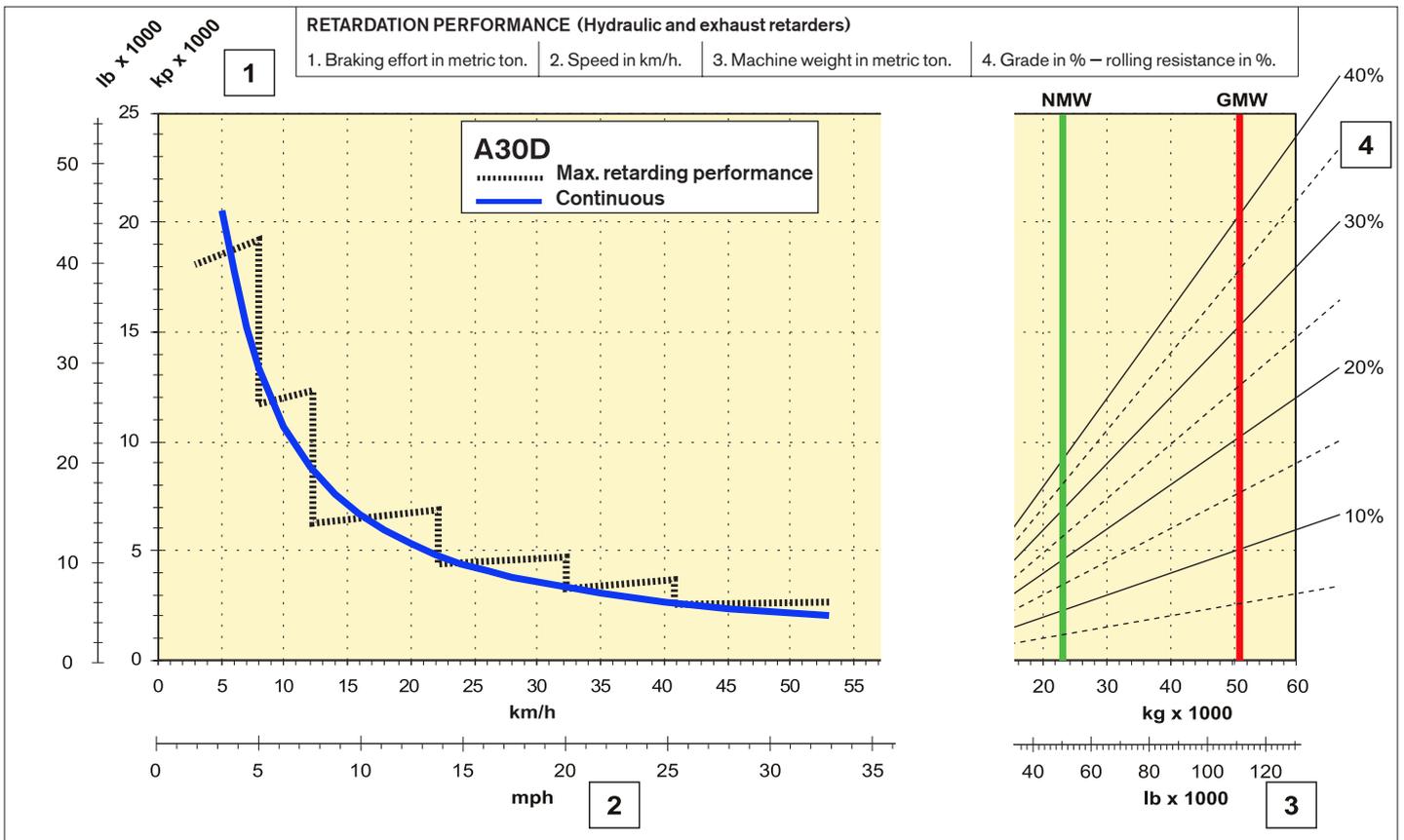




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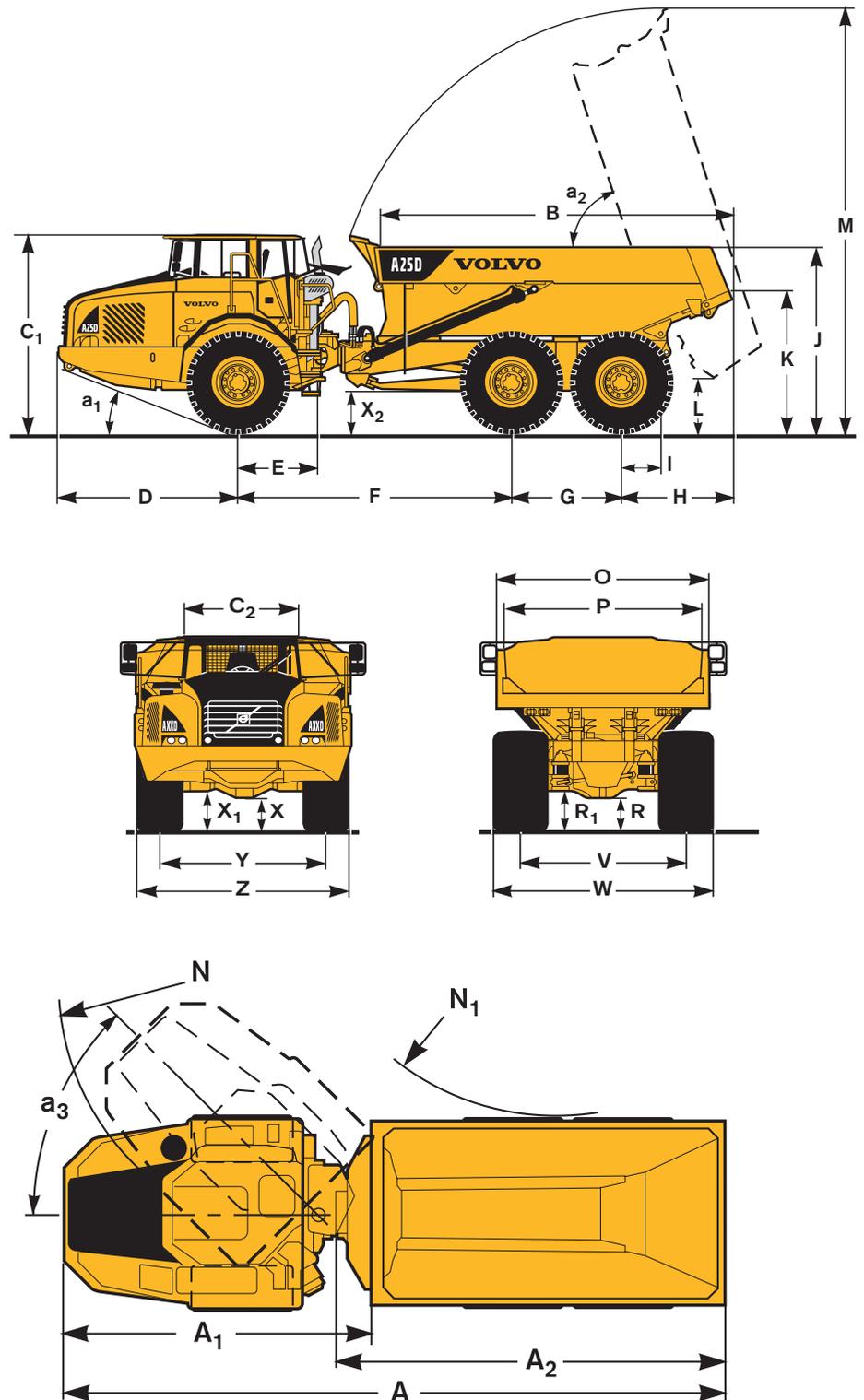
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- Read down for vehicle speed.



# Specifications A25D - A30D Low profile

Pos	Metric (mm)		Imperial (Feet)	
	A25D	A30D	A25D	A30D
A	10 220	10 297	33'6"	33'9"
A <sub>1</sub>	4 954	4 954	16'3"	16'3"
A <sub>2</sub>	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 <sub>1</sub>	3 048	3 048	10'0"	10'0"
C <sub>1</sub> **	2 998	2 998	9'10"	9'10"
C <sub>2</sub>	1 768	1 768	5'10"	5'10"
C <sub>3</sub>	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"
J**	2 728	2 806	8'11"	9'2"
K	2 102	2 181	6'11"	7'2"
K**	2 052	2 131	6'9"	7'0"
L	677	686	2'3"	2'3"
M	6 399	6 404	21'0"	21'0"
M**	6 346	6 313	20'10"	20'9"
N	8 105	8 105	26'7"	26'7"
N <sub>1</sub>	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 <sub>1</sub>	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 <sub>1</sub>	581	582	1'11"	1'11"
X <sub>2</sub>	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 <sub>1</sub>	23,5°	23,5°	-----	-----
a <sub>2</sub>	74°	70°	-----	-----
a <sub>3</sub>	45°	45°	-----	-----

A25D: Unloaded machine with 23,5R25  
 \*\*A25D: Unloaded machine with 650/65R25  
 A30D: Unloaded machine with 750/65R25  
 \* A30D with optional 23,5R25 tires



## 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  
Handrails on fenders  
Intermittent wiper control  
Windshield washers

### Comfort

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

### Engine

Direct injected, electronically controlled  
Turbocharged, intercooled  
Remote oil drainage plug  
Remote oil filters for ease of access  
Preheater for easier cold starts  
Coolant filter

### Electric system

Aternator, 55 A  
Battery disconnect switch  
Electrical outlets, 24V in cab  
Lights:  
• Headlights  
• Parking lights  
• Direction indicators  
• Rear lights  
• Reverse lights  
• Brake lights  
• Cab lighting  
• Instrument lighting  
Pilot lamps for all switches

### Operator information interface

Gauges:  
• Speedometer  
• Tachometer  
• Brake pressure  
• Fuel  
• Transmission oil temperature  
  
Warning lamps 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  
• Trouble shooting diagnostics  
• Hour meter  
• Clock  
• Machine settings

### Cab

Low profile cab for underground operation

### Drivetrain

Automatic transmission  
Torque converter with automatic lock-up  
Variable hydraulic transmission retarder  
Drop box, single stage  
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

Low profile body  
Body prepared for exhaust heating  
Load and Dump brake

### Tires

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

### Other

Air drier

## OPTIONAL EQUIPMENT

### 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  
Extra air cleaner, oil bath type  
External emergency engine stop  
Delayed engine stop  
Electric engine heater (120V or 240V)  
Engine and cab heater, diesel \*\*  
Fast fuel filling system \*\*

### Electrical

Work lights, roof mounted  
Work lights, reverse, fender mounted  
Rotating beacon, collapsible mount  
Rotating beacon at rear end \*\*  
Reverse alarm  
Rear vision system  
Anti-theft system (prevents engine start)  
Head lights for left hand side traffic  
Alternator, heavy duty 80 A  
Battery charger \*\*  
Jump start connection, NATO \*\*  
Back up light, extra \*\*  
Cab heater, electrical \*\*

### Cab

Air suspended, electrically heated operator's seat  
Rotating drivers seat 180° \*\*  
Seat cover \*\*  
Instructor seat with safety belt  
Electrically heated rear-view mirrors  
Air conditioning  
Radio installation kit  
Radio  
Cable kit for cab heater (120V or 240V)  
Solar guard film  
Stick steering system for reverse travelling \*\*  
Steering wheel for reverse travelling \*\*  
Throttle pedal for reverse travelling \*\*  
Brake pedal for reverse travelling \*\*  
Rear view mirrors for reverse travelling \*\*  
Exhaust pipe moved for reverse travelling \*\*  
Washer and wiper for rear window \*\*

### External

Rear mudflaps  
Additional front bumper (rubber)

### Attachments

Body with sight hole in head board (Twin Steer) \*\*

### 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

### Tires

A25D: 650/65R25  
A30D: 23,5R25

### Other

Synthetic hydraulic oil (biologically degradable)  
Arctic oil kit  
Toolbox  
Dumping angle limitation (hydraulic) \*\*

(\* \* Special Optional Equipment)

*Under our policy of continual product 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**

**Construction Equipment**

Ref. No 21 1 669 4169 English  
Sweden 2003-04 ART  
Volvo Växjö