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VOLVO ARTICULATED HAULERS

A25E 4X4



MORE CARE. BUILT IN.



TAKING CARE OF BUSINESS – IN A MORE FLEXIBLE WAY

A25E 4x4 is the perfect choice for jobs in tight places. The machine is based on the E-series' uncompromising combination of productivity, operator comfort, and maximal availability. Add to that an incredibly tight turning circle, thanks to the short wheel base and the possibility of equipping the A25E 4x4 with the unique turn-around wheels. The result is a machine that only Volvo can supply, and that gives unbeatable manoeuvring capacity and profitability on cramped work sites.

Volvo leads the way in development

As the world's biggest and leading manufacturer of engines for heavy-duty vehicles, Volvo has an unbeatable advantage. With in-house developed drivetrains – adapted to the tough demands on articulated haulers – the A25E 4x4 has the required power and durability, giving maximal productivity. The unique steering system, Volvo's patented Load & Dump brake, the fast dump hydraulics for optimally efficient dump cycles combine to provide a profitable equation – you can haul even more, even faster – to the lowest possible cost.

A partner to trust

Choosing an articulated hauler from Volvo gives you both a machine and a partner to trust. Volvo A25E 4x4 is one of the most reliable machines on the market. Volvo Construction Equipment's global dealer network and well-trained service technicians means that you always have a committed partner near yourself and your operations. This makes for outstanding peace-of-mind ownership, giving you a machine that always gives maximal profitability and productivity.

Specifications	A25E 4x4	
Engine, Volvo	D9B ABE3* / AAE3**	
Max power at	35 r/s	2 100 rpm
SAE J1995 Gross	224 kW	305 hp
ISO 9249, SAEJ1349	223 kW	303 hp
Max torque at	20 r/s	1 200 rpm
SAE J1995 Gross	1 700 Nm	1 254 lb ft
ISO 9249, SAEJ1349	1 689 Nm	1 246 lb ft
Max. Speed	53 km/h	32.9 mph
Load Capacity	24 000 kg	26.5 sh tn
SAE 2:1 heap	13,0 m ³	17 yd ³
Net weight	19 470 kg	42 924 lb
Gross weight	43 470 kg	95 835 lb

*) Meets Europe (EU) Stage IIIA

**) Meets US (EPA) Tier 3, California (CARB) Tier 3 and Europe (EU) Stage III.





A GOOD TURN FOR YOUR BUSINESS GROWTH

It was Volvo that developed the articulated hauler concept in the 1960s, and since then we have been the development leader in a wide variety of applications. With the four-wheeled A25E 4x4 we solidify our position as the world's leading manufacturer of transport vehicles for mines, tunnels, and rock quarries. Frame steering and frame joint enable the hauler to handle rugged off-road operations. The extremely tight turning circle gives unbeatable flexibility, and equipped with the Low Profile cab, you get a hauler with excellent manoeuvrability in underground work.

The optimal solution

With the A25E 4x4 you get maximal productivity even where operating space is tight. In tunnelling, a tight turning circle and the ability to turn around in narrow tunnels is absolutely necessary. And the A25E 4x4 can do exactly that, thanks to the possibility of equipping the machine with the unique turn-around wheels. This enables the machine to make trouble-free turns in a tunnel that is only 9.5 metres wide. Even without the turn-around wheels the machine is very manoeuvrable thanks to the short wheel base. And this means that even where conditions are harsh and tough, you'll get the job done. Where there is a demand for allround capacity and flexibility, that's where A25E 4x4 is the natural choice.

More tons per litre fuel

Volvo's in-house developed engine gives A25E 4x4 both outstanding power and rimpull, with lowest possible fuel consumption. The D9-engine features Volvo Advanced Combustion Technology, V-ACT, getting maximal energy from every drop of fuel. This results in both power and rimpull, as well as a profitable equation – more tons hauled per litre fuel.

Maximal rimpull with Powertronic

Volvo's refined automatic transmission Powertronic gives A25E 4x4 maximal performance. Powertronic always shifts smoothly and at exactly the right time, which means comfort and high rimpull at all times.

Fast and controlled dumping

It only takes 7 seconds to dump a fully loaded body, and it's lowered just as fast. Volvo's unique and operator-friendly Load & Dump brake increases productivity, and decreases operating costs. With the simple push of a button, the transmission is shifted to neutral and the service brake are activated.



Turn-around Wheels

Equipped with the unique turn-around wheels enables the machine to make trouble-free turns in a tunnel that is only 9.5 metres wide.

Adapt the body

Hauling shot rock or other abrasive materials – add the optional body wear plates for maximum wear protection.

Maintenance and uptime

Electronic monitoring of fluid levels minimizes service needs and enhances reliability.

No daily or weekly greasing means more uptime for productive work



JOB SATISFACTION IS STANDARD

To us it's only natural – a world-class hauler has to have a world-class operator's environment. Without a satisfied and effective operator, the hauler can never give maximal productivity. Volvo Care Cab is the quietest, cleanest, roomiest, and safest cab we've ever built. Offering operators the industry's most effective workplace – quite simply, we see that as a solid and sound investment.

Working hard - the easy way

Our haulers feature the quiet, clean, and roomy Volvo Care Cab. The first thing you notice is that it's so easy to get in to the A25E 4x4. The steps are well-adapted, the door opening is wide and without threshold. Inside the cab there is plenty of space for both the operator and personal items such as your boots and a lunchbox. The ergonomically designed operator's seat can easily be adjusted for maximal comfort. The steering wheel is also adjustable, both vertically and angled. All controls are operator-friendly and located within easy reach.

Complete control

Maximal allround visibility is an absolute prerequisite for both high safety and high productivity. The operator in the A25E 4x4 sits up high in the central operator's seat. Allround visibility is improved even more thanks to the large rear-view mirrors, wide windshield and windows, as well as well-placed cab pillars.

Pure working pleasure

The unique filter system in the Volvo Care Cab provides a very clean cab environment in a class of its own. The sound level is comfortably low, and the efficient climate control unit ensures that the cab temperature is always optimal for operator comfort.

Volvo - part of the natural cycle

Volvo's machines are built for minimized environmental impact. Caring for the environment is a natural extension of our work with giving the operator and our surroundings maximal protection. One example is the Volvo V-ACT-engine, which is very fuel-efficient at the same time as it gives maximal power and torque. A25E 4x4 meets all governing emission standards and has a low sound level, both inside and outside the cab. Another important part of our commitment to the environment is that A25E 4x4 is 95 percent recyclable. Engine, transmission, and hydraulics are overhauled and reused in our exchange system.



Volvo Care Cab

Volvo's world-class operator's environment features a larger, roomier interior, and large storage compartments.

The Volvo Care Cab pressurizes and filters all incoming air twice, promoting a clean interior and a healthy, happy operator.

The Contronic Monitoring System alerts the operator of machine status and maintenance needs, providing maximum availability and protection during the shift.

Good visibility, from the wide windshield to the well-placed rear-view mirrors, allows for safe and productive work.



VOLVO – THE TRUSTED PARTNER FOR PRODUCTIVITY

Volvo's Unique Self-compensating Hydro-mechanical Steering

- Powerful and accurate steering for safe operation and high productivity.

Excellent Operator Environment

- A spacious and comfortable cab with centrally positioned operator contributes to high productivity throughout the shift.
- Ergonomically positioned controls, air conditioning, air suspension seat with tilt/ telescopic steering wheel, wide angle forward view for reduced operator fatigue and high safety.

Heavy Duty Axles

- Purpose built with 100% dog clutch type diff-lock.

Exhaust Brake and Retarders

- Easy to operate powerful retardation system reduces wear and operating cost.

Volvo Drive Train

- Correctly matched Volvo-designed components, specifically developed for hauler applications. Low power losses and long service life.
- 6-speed transmission gives smooth shifting and high power at all times.

State-of-the-Art Hydraulic System

- Variable displacement piston pumps consume power only when required.

Dumping with power and control

- Fast dumping hydraulics 7 sec dumping, 7 sec lowering
- Load&Dump brake provides ease of operation
- Body design and great tipping angle promotes both load retention and ejection.
- High strength steel 400HB body, optional wear plates for transporting shoot rock
- Optional Low profile body for underground operation



Purpose-built dropbox

- Proven in-line drop-box provides excellent ground clearance, gives stability and low internal power losses.

Swing Down Front Service Platform

- Grouped engine filters and remote mounted drains reduce service time. Contronic System electronically monitors fluid levels and systems for ease of service and trouble shooting.

Maintenance Free Suspensions

- Front axle has independent wheel movement via a 3-point mounting system.

Serviceability

- No daily or weekly greasing.

Frames and Chassis

- Box type design frames provides strong, weight optimized, high quality frames for long service life
- Rotating hitch and articulated steering provides good off-road mobility and less stress on the frames in tough applications. High positioned hitch provides high ground clearance and stability.

Adapted for underground operation

- Optional Low profile Cab, -270 mm
- Optional Low Profile Body
- Optional front protection
- Optional Working lights
- Optional Rear vision system
- Optional Turn-around wheel system

High Capacity Cooling System

- Power and fuel saving, hydraulically driven, side mounted variable speed fan consumes power only when needed.



VOLVO A25E 4X4 IN DETAIL



Engine

Engine: Volvo, V-act Tier III, 6-cylinder in-line, direct injected electronically controlled. Volvo's turbocharged and intercooled 4-stroke diesel engine, generates high torque at low rpm for quick response and low exhaust emissions. Cooling system: High capacity cooling system with power and fuel saving, variable speed fans.

A25E 4x4

Engine	Volvo D9B ABE3* / AAE3**	
Max power at	35 r/s	2 100 rpm
SAE J1995 Gross	224 kW	305 hp
Flywheel power at	35 r/s	2 100 rpm
ISO 9249, SAE J1349	223 kW	303 hp
Max torque at	20 r/s	1 200 rpm
SAE J1995 Gross	1 700 Nm	1 254 lb ft
ISO 9249, SAE J1349	1 689 Nm	1 246 lb ft
Displacement total	9,4 l	574 in ³

*) Meets Europe (EU) Stage IIIA

**) Meets US (EPA) Tier 3, California (CARB) Tier 3 and Europe (EU) Stage III

Engine brake	Exhaust retarder
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Drivetrain

Torque converter: Built-in Lock-up function. Transmission: Fully automatic Volvo PowerTronic planetary transmission with six forward gears and two reverse gears. Dropbox: Volvo-designed with high ground clearance. Axles: Heavy duty, purpose built Volvo design with fully floating axle shafts, planetary type hub reductions and 100% dog clutch type diff-lock.

A25E 4x4

Torque converter	2,37:1
Transmission, Volvo	PT 1563
Dropbox, Volvo	IL1
Axles, Volvo	Front / Rear AH 64 / AH 71

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.

A25E 4x4

Voltage	24 V
Battery capacity	2x170 Ah
Alternator	2,24 kW (80 A)
Starter motor	7,0 kW (9,5 hp)





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 rear axle. 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.

Cab

Ergonomically designed. Unobstructed wide angle forward view. Operator centrally positioned above the front axle. Ergonomically positioned controls. Air conditioning. Adjustable operators seat with retractable seat belt. Filtered fresh air and four speed fan. Operator Communication System: Contronic, user-friendly and easy-to-understand information, all vital machine functions are constantly monitored. Standard: ROPS/FOPS approved according to (ISO3471, SAE J1040) / (ISO3449, SAE J231)

A25E 4x4

Sound level in cab ISO 6396	74 dB(A)
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Hydraulic System

Pumps: Two main pumps provide steering and dumping functions, and two pumps power the cooling functions. There is also a ground dependent pump for secondary steering, mounted on the dropbox.

A25E 4x4

	Pump capacity per pump
Engine-dependent, main pump	146 l/min
Ground-dependent	122 l/min
at shaft speed	46,2 r/s
Working pressure	25 MPa

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, $\pm 45^\circ$.

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.

A25E 4x4

Tipping angle	59°
Tipping time with load	7 s
Lowering time	7 s

Frames and Chassis

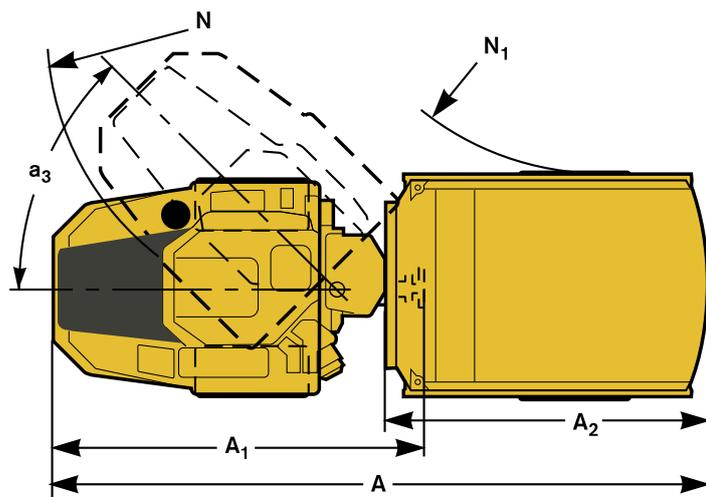
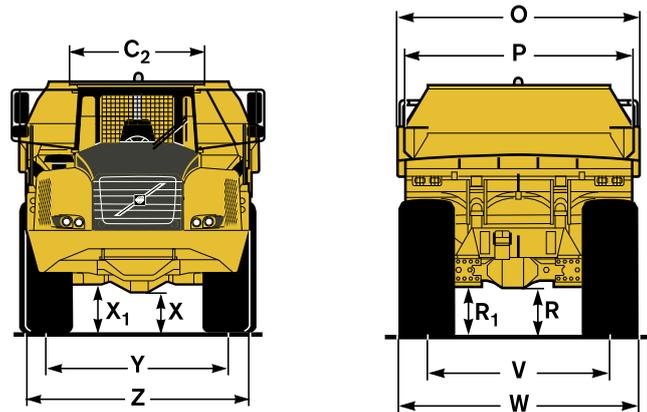
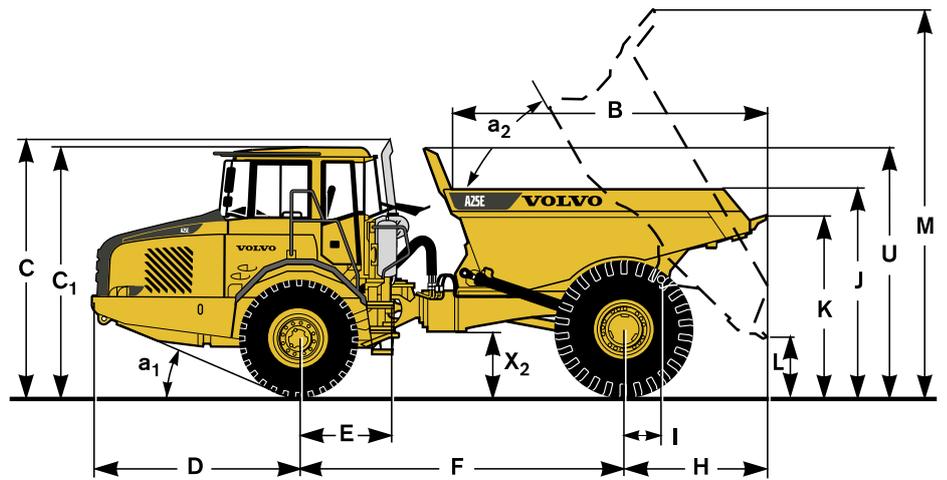
Box type design frames. 360° rotating, high positioned hitch. Independent wheel movement via a 3-point mounting system. Straddle mounted bogie beam.

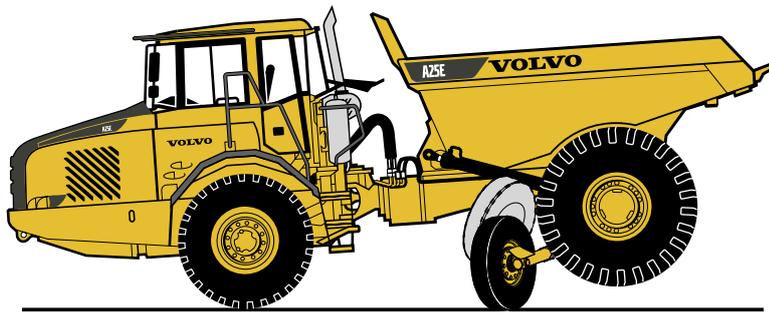


SPECIFICATIONS

Pos	Metric (mm)	Imperial (Feet)
	A25E 4x4	A25E 4x4
A	8 939	29'4"
A ₁	4 954	16'3"
A ₂	4 558	14'11"
B	4 219	13'10"
C	3 470	11'5"
C ₁	3 332	10'11"
C ₂	1 768	5'10"
D	2 766	9'1"
E	1 210	4'0"
F	4 254	13'11"
H	1 919	6'4"
I	495	1'7"
J	2 794	9'2"
K	2 416	7'11"
L	773	2'6"
M	5 176	17'0"
N	7 092	23'3"
N ₁	3 197	10'6"
O	3 130	10'3"
P	2 930	9'7"
R	637	2'1"
R ₁	664	2'2"
U	3 317	10'11"
V	2 374	7'9"
W	3 117	10'3"
X	461	1'6"
X ₁	585	1'11"
X ₂	886	2'11"
Y	2 258	7'5"
Z	2 859	9'5"
a ₁	23.5°	23.5°
a ₂	59°	59°
a ₃	45°	45°

Unloaded machine with 23,5 R25 (front) and 29,5 R25 (rear) tires

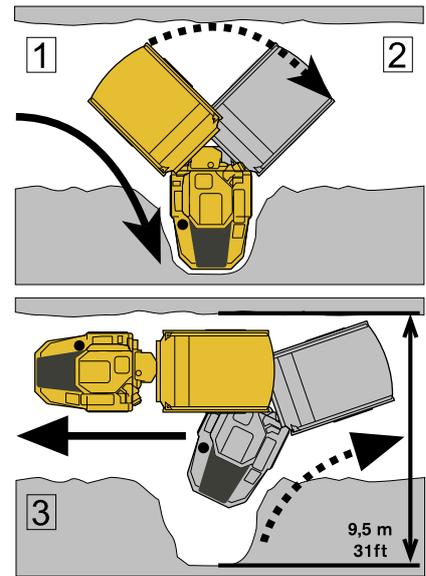




A25E 4x4 Turn-Around (optional)

Turn-around system. Turns 180° in 25 seconds. A width of only 9.5 m (31 ft) is needed to turn the machine 180° in a 3-step operation. The turn-around system is hydraulically operated from the operator's seat and raises the unloaded trailer unit, thus enabling the steering hydraulics to swing the trailer through 90°.

1. Drive up to the turning point, steer the tractor unit fully to one side and engage the brakes.
2. Raise the trailer unit and steer the maximum 90°.
3. Lower the trailer and reverse away from the turning point.



Load capacity

	A25E 4x4	
Standard Body		
Load capacity	24 000 kg	26.5 sh tn
Body, struck	9,5 m ³	12.4 yd ³
Body, heaped	13,0 m ³	17.0 yd ³

Weights

	A25E 4x4	
Tires	Front: 23,5R25 Rear: 29,5R25	
Operating weight unloaded		
Front	12 400 kg	27 337 lb
Rear	7 070 kg	15 586 lb
Total	19 470 kg	42 923 lb
Payload	24 000 kg	52 910 lb
Total weight		
Front	15 650 kg	34 502 lb
Rear	27 820 kg	61 332 lb
Total	43 470 kg	95 834 lb

Operating weight includes all fluids and operator.

Ground Pressure

	A25E 4x4	
Tires	Front: 23,5R25 Rear: 29,5R25	
Unloaded		
Front	125 kPa	18.1 psi
Rear	49 kPa	7.1 psi
Loaded		
Front	159 kPa	23.0 psi
Rear	194 kPa	28.1 psi

Speed

	A25E 4x4	
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

Fill capacities

	A25E 4x4	
Crankcase	40 litre	10.6 US gal
Fuel tank	400 litre	106.0 US gal
Cooling system	115 litre	30.4 US gal
Transmission, total	41 litre	11.0 US gal
Dropbox	8,5 litre	2.2 US gal
Axles, front/rear	33 litre	8.7 US gal
First bogie axle	52 litre	13.7 US gal
Hydraulic tank	175 litre	46.0 US gal

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	145 000 psi
Tensile strength	1250 N/mm ²	181 000 psi
Hardness	400 HB	

STANDARD EQUIPMENT

Safety	A25E 4x4
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	A25E 4x4
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	•
Sliding window	•

Engine	A25E 4x4
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	A25E 4x4
80 A alternator	•
Battery disconnect switch	•
Extra 24 V socket for lunch cooler	•
Lights:	•
• Headlights	•
• Parking lights	•
• Direction indicators	•
• Rear lights	•
• Back-up light	•
• Brake lights	•
• Cab lighting	•
• Instrument lighting	•

Operator information interface	A25E 4x4
Gauges:	•
• Speedometer	•
• Tachometer	•
• Brake pressure	•
• Fuel	•
• Transmission oil temperature	•

Warning lights grouped and easy to read	A25E 4x4
Central warning (3 levels) for all vital functions	•

Central positioned information display:	A25E 4x4
• Automatic pre-start checks	•
• Operation information, easy-to-find menu	•
• Troubleshooting diagnostics	•
• Hour meter	•
• Clock	•
• Machine settings	•

Drivetrain	A25E 4x4
Automatic transmission	•
Torque converter with automatic lock-up in all gears	•
Single stage dropbox	•
Hydraulic variable retarder	•
100% longitudinal differential lock	•
100% differential locks in all axles	•

Brakes	A25E 4x4
Air-hydraulic disc brakes	•
Two circuit brake system	•
Parking brake on prop shaft	•

Body	A25E 4x4
Body prepared for exhaust heating	•
Load and dump brake	•

Tires	A25E 4x4
Front: 23.5R25	•
Rear: 29.5R25	•

Other	A25E 4x4
Air drier	•

OPTIONAL EQUIPMENT

Plates and stickers **A25E 4x4**

CE-marking	•
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General **A25E 4x4**

CareTrack, GSM	•
CareTrack, GSM/Satellite	•
Decal set, USA	•
Emergency steering, reverse (France)	•
License plate bracket (illuminated)	•
Noise reduction kit (fulfils 2000/14/EC)	•
Reflector kit (road regulations)	•
SMV sign (Slow Moving Vehicle)	•
Turn-around wheels (4x4 only)	•
Warning triangle	•
Year of manufacturing plate	•

Service and maintenance **A25E 4x4**

Engine hood opener, electrical	•
Parameter settings INT	•
Parameter settings USA	•
Toolbox	•
Tool kit	•
Tool kit, Japan	•

Shipment/delivery equipment **A25E 4x4**

Lifting tools 4x4, wheel mounted	•
Transport rust protection R2	•

Engine **A25E 4x4**

Air pre-cleaner, cyclone type	•
Air pre-cleaner, oil-bath type	•
Air cleaner, heavy duty, EON	•
Engine shutdown timer	•
Engine EU/EPA:3, certified	•
Engine EU:3, certified	•
Engine heater, 120 V, USA	•
Engine heater, 240 V	•
High engine idle speed	•

Electrical **A25E 4x4**

Battery Brazil	•
Headlights, assym. left	•
Reverse alarm	•
Rotating beacon	•
Rotating beacon, flashing strobe type, US only	•
Working lights, rear mounted	•
Working lights, roof mounted	•

Transmission **A25E 4x4**

Speed limiter, 25 km/h	•
Speed limiter, 30 km/h	•

Body **A25E 4x4**

Body exhaust heating	•
Underground body without wear plates	•
Wear plates, 450 HB, 8 mm	•

Cab **A25E 4x4**

Air condition	•
Anchorage, operator's manual	•
Armrest, for BE-GE seat	•
Armrest, for KAB seat	•
Cable kit, for cab heater 120 V, USA	•
Cable kit, for cab heater, 240 V	•
Head restraint, for BE-GE seat	•
Head restraint, for KAB seat	•
HEPA cab filter (WL: Asbestos dust protection filter)	•
Operator's seat, air susp, BE-GE	•
Operator's seat, air susp, KAB	•
Operator's seat, mech susp, BE_GE	•
Operator's seat, underground, mech susp BE-GE	•
Radio installation kit	•
Radio with CD player	•
Radio with cassette player	•
Rear view mirrors, el.heated	•
Seat belt XXL	•
Solar guard film, windows	•
Sun blinds, side windows	•
Tachograph	•
Underground cab (lowered 270 mm)	•
Universal door/ignition key	•

Hydraulics **A25E 4x4**

Arctic oil kit	•
Hydraulic fluid, biodegradable	•
Hydraulic fluid, Brazil	•

External **A25E 4x4**

Front mudguard wideners for 23.5, 26.5, 29.5 tires	•
Towing hitch	•
Wheel blocks	•

Protection equipment **A25E 4x4**

Anti-theft system	•
Brake guards	•
Front protection, rubber	•
Rear vision system, colour, LCD monitor	•
Rear vision system, monochrome	•
Safety kit (first aid kit and fire extinguisher)	•



Volvo Construction Equipment is different. Our machines are designed, built and supported in a different way. That difference comes from an engineering heritage of over 175 years. 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.**



Not all products are 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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