

Volvo Articulated Haulers 41t 485 hp



Volvo Construction Equipment



Being the first. Keeping the lead.

Since introducing Gravel Charlie, the world's first series manufactured articulated hauler, Volvo has consistently led the way when it comes to pioneering technology which delivers unrivalled levels of sustainable productivity and performance. Today we offer the most comprehensive range of articulated haulers in the industry, with common technology throughout, ensuring optimum results whatever size class you operate. Combined with a range of complementary services and solutions, you can count on Volvo Articulated Haulers to deliver the lowest possible cost per tonne.



DR631 "Gravel Charlie" The world's first series manufactured articulated hauler DR 860 3-axle machine with unique bogie concept 5350 Featuring fully automatic transmission, unique suspension system and class leading cab with low noise level A25C The first articulated hauler with low emission engine as standard A40 Product range from 20t to 40t D-series Built with a focus on the operator



As part of our enduring focus on environmental care we are committed to Science Based Targets to achieve net-zero value chain emissions by 2040. From product planning through to end-of-life, our focus continues to be on minimizing our global footprint and driving transformation in our industry.

Follow our carbon reduction journey



E-series and A40 FS The world's first full suspension articulated hauler



F-series Further improving ease of operation and environmental care

G-series

G-series Wet, cooled brakes on all models **A60H** The world's largest articulated hauler

211

A 25t to 55t product offering, complete with a range of services

ODA

Keep on moving

Effective maintenance can have a big influence on your total cost of ownership. Volvo Articulated Haulers are designed to be easy to service, helping you to maximize your uptime and keep maintenance costs to a minimum.

Reduce oil volume by half

When measured over the lifetime of the machine, Volvo Articulated Haulers require less than half the fluid volume compared to competition, benefitting both the environment and your operating costs.



Easy to service

Servicing your machine is quick and easy thanks to industry leading service access and essential maintenance points accessible from the ground. The front grill swings down, opening a service platform with anti-slip steps and the electric hood opens to 90 degrees, allowing full access to the engine compartment.



Service alerts

Fluid levels are constantly monitored with timely service alerts displayed on the dashboard, helping you stay on top of your maintenance requirements.





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NO DAILY OR WEEKLY GREASING

With Volvo Articulated Haulers greasing is only required every 250 hours - the best in the industry - delivering maximum uptime.

Haul Assist

Gain access to a set of tools designed to help you get the most out of your Volvo Articulated Hauler and boost your profitability.

Proactive tire management

Optimize tire life with the support of the Tire Pressure Monitoring System, which allows the operator to monitor tire pressure and temperature from the comfort of the cab.



A complete site overview

Monitor the whereabouts of all your machines, vehicles and visitors in real-time with Map, a connected tool which provides accurate positioning to help monitor on-site traffic and navigate the site more efficiently.



Go into detail

Reports can be generated automatically on a daily and weekly basis, or manually at any time, including the geo-tracking of moved material which is enabled by Map.

Support you can count on

As a fully integrated and factory-fitted Volvo system, all the components, hardware and software of Haul Assist are supported by your Volvo dealer to keep your operation running smoothly. What's more, you will benefit from over-the-air updates, easy upgrades and remote support.







TAKE CONTROL OF YOUR PRODUCTIVITY

On-Board Weighing provides real-time payload information which can help to eliminate carry-back and overloading; the result is peak productivity, reduced fuel consumption and less machine wear.

Move more for less

Boost your profits with Volvo Articulated Haulers, designed to deliver high productivity at the lowest cost per tonne.

Optimized payload

The machine is optimized for efficiency featuring high payload capabilities. Its smart design allows for more capacity while reducing fuel consumption so you can move more for less.



Volvo dynamic drive

Dynamic and predictive gear selection adapts to operating conditions, for improved comfort and fuel efficiency.



Simply the best

The machine delivers unbeatable off-road performance in its class with features including proven Volvo drivetrain, automatic drive combinations including 100% differential locks, all-terrain bogie and hydro-mechanical steering.



Smooth descent

Make your daily job easier with downhill speed control. The function automatically maintains a constant speed when operating on downward gradients and is the perfect alternative to the retarder pedal for a more efficient and comfortable shift.



Volvo Articulated Haulers deliver the highest profitability.

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INTELLIGENT EFFICIENCY

Experience superb fuel efficiency without compromising on power and performance thanks to the world-renowned Volvo drivetrain, including Terrain Memory. The intelligent function identifies and remembers slippery road segments to ensure optimized traction control – the result is excellent off-road mobility.

Comfort at speed

Rough roads? Just relax and step on the gas. The A45G FS features unique technology which delivers superior productivity, travel speed and cycle times when compared to other haulers.

Unique suspension

The unique front suspension is equipped with a set of accumulators and adapts to both payload and ground conditions, delivering unbeatable operator comfort. The rear suspension features two high pressure accumulators for loaded operations and two low pressure accumulators for unloaded operations. The cross flow between the hydraulic cylinders stabilizes both trailer and tractor, allowing for higher average speeds over poor ground structures.



Active leveling sensors

Six level sensors actively monitor the frame movement in relation to the axles and signal the hydraulic system to adjust the suspension, optimizing stability during travel.



Put to the test

This example shows how replacing conventional suspension haulers (A45G) with full suspension haulers (A45G FS) can have a large effect on your business. It's based on a fleet of 16 articulated haulers, with a total haul cycle of 3.1 kilometers.



Total fleet size -18%

By using Full Suspension haulers, you can reduce your fleet size to move the same amount of material.

Average cycle time -20%

Due to the ability of the Full Suspension machine to drive faster over challenging terrain, cycle times are significantly reduced.

Cost of ownership -13%

With fewer machines, delivering faster cycle times, the fleet total cost of ownership is reduced.

Cost per tonne -13%

A side-by-side study of an A45G compared to an A45G FS showed the A45G FS delivered a lower cost per tonne.

Productivity +25%

Faster cycle times result in an increase of hauler production per operating hour.



Watch The Race between the full suspension and standard suspension Volvo haulers!

Control in comfort

Featuring superior comfort, ease of operation and safety, the industry-leading cab appeals to operators and helps maintain productivity all day, every day.

Total control

Volvo Articulated Haulers are packed with features to help operators get the most from the machine. Intelligent functions such as cruise control, downhill speed control and hill assist help control the hauler with ease and efficiency, for enhanced safety and productivity in all conditions.



Ease of operation

The ergonomic, comfortable and easy-to-understand controls are designed to suit all operators. Additional automatic functions such as OptiShift – which enables fast and smooth directional changes – further enhance ease of operation.



Operator comfort

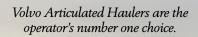
Feel comfortable and spend more time in the Volvo Articulated Haulers. The centrally positioned operator, superior steering, excellent suspension, low noise levels, climate control, space and visibility reduce operator fatigue for more effective operations.



Safety first

Whether its operators, trainers, technicians or site workers – safety on site is of fundamental importance. In the Volvo Articulated Haulers superior visibility and efficient lighting combine with features such as the brake test and dump support, helping to keep everyone working around the machine safe.





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OPERATOR'S Choice

A happy operator is a more productive operator and when many other machines are onsite, most operators prefer the Volvo. Even in the most adverse conditions, its comfortable cab and ease of operation keep operators alert and performing their best.

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The ultimate Hauler

Only from Volvo

- Industry-leading Volvo engine and driveline: high performance, high fuel efficiency
- Terrain Memory function: optimized engagement of the traction control for excellent off-road mobility
- Volvo dynamic drive
- Automatic drive combinations including 100% differential locks, all-terrain bogie and hydromechanical steering
- OptiShift: fast and smooth directional changes

MS65 VOINO

The operator's choice

- Ease of operation: ergonomic and easy-to-understand controls
- Centrally positioned operator for best-in-class visibility
- Cruise control, hill assist, dump support system, load and dump brake
- The downhill speed control function automatically maintains a constant speed when operating on downward gradients
- Built-in brake test: schedule and perform a stationary brake test, guided by the machine display

Solutions for you

- Easy machine monitoring: CareTrack,
- ActiveCare • Genuine Volvo Parts
- Volvo Site Simulation: get recommendations on the best fleet configuration and site set-up
- Operator Training Program: unlock the full potential of your machine
- Uptime Services: control your maintenance costs

Proven full suspension concept

- \bullet Reduce total fleet size by 18 %
- Reduce average cycle time by 20%
- \bullet Increase productivity by 25%
- Reduce cost per tonne and cost of ownership by 13 %
- Unique suspension contributing to a smooth and productive ride
- Active leveling sensors deliver optimized stability

Service and maintenance

Haul Assist

- On-Board Weighing: real-time payload monitoring
- Tire Pressure Monitoring System
- Map: real-time positioning of on-site traffic
- Productivity Reports, including the geo-tracking of moved material
- Over-the-air updates, easy upgrades, remote support

• 250-hour greasing interval

- Half the fluid volume compared to the competition
- Service reminders and fluid level monitoring
- Industry-leading service access and groundaccessible service points



Configured for success

Ensuring your fleet is configured in the correct way can yield huge benefits to your operation including more productivity, enhanced performance and less costs.

Here are some tips to help tailor your new Volvo Articulated Hauler according to the application, site conditions and type of transported material, as well as matching to the appropriate loading unit. For more detailed information, talk to your Volvo dealer!

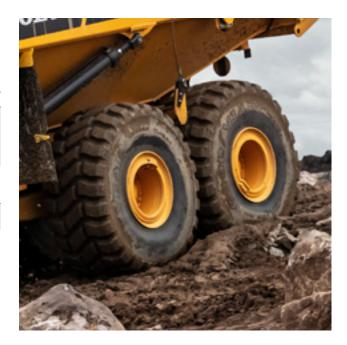
Body options

Question	Answer	Solution
Dealing with height restrictions?	No	Select standard body
Operating in restricted height conditions e.g. silos or underground	Yes	Select low profile body
Hauling abrasiva matarial?	No	Go to next question
Hauling abrasive material? Granite, silicate etc	Yes	Select wear plates / rock liners for extended service life
	> 1.5 ton/m ³ (gravel, blasted rock)	Go to next question
What material density? Gravel is ~1.65 ton/m ³	1.1 - 1.5 ton/m ³ (dry earth, shale)	Select side extensions to increase body volume
	< 1.0 ton/m ³ (coal, fly ash etc)	Select light material kit to increase body volume
Front spill protection needed?	No	Go to next question
Getting loaded by large excavator	Yes	Select front spillguard
	No	Go to next question
Extra load retention needed? Risk of dropping material e.g. when climbing steep inclines	Yes, but not hauling boulders	Select tailgate – overhung type – to reduce spillage
	Yes, hauling boulders	Select tailgate – underhung type – to reduce spillage
Hauling sticky material?	No	Go to next question
Risk of carry-back	Yes	Select body exhaust heating

Exceeding gross machine weight is not permitted. Payload should be reduced by the weight of the optional equipment.

Tires

Question	Answer	Solution
Operating on abrasive haulroad? Risk of tire cuts or extensive	No	E3 tires are optimized for soft ground, offering the best traction and high average speed
wear	Yes	Select E4 tires for the best cut resistance, comfort and tread life
Extra flotation needed? Risk of sinkage in soft ground	No	Select standard profile tires
	Yes	Select low profile tires, featuring lower ground pressure for improved flotation, stability and comfort



Optimal pass-matching

Excavator Number of passes	Volvo	EC380	EC480	EC530	EC550	EC750	EC950
		Number of passes					
A45G FS 11 8 7 6 5 4	A45G FS	11	8	7	6	5	4

Excavator overcapacity, 3 buckets or below Well matched, 4-6 buckets (≈ 90 seconds loading time) Excavator undercapacity, 7 buckets or more Excavator undersized for optimum match

Volvo	L150	L180	L220	L260	L350	
Wheel Loader		Number of passes				
A45G FS	6	5	5	4	3	



Loader overcapacity, 2 buckets or below Well matched, 2-3 buckets (≈ 90 seconds loading time) Loader undercapacity, 4 buckets or more

Loader undersized for optimum match. Reach might also be an issue



Hauler chassis solutions

With Special Application Solutions and different chassis options you can tailor Volvo Articulated Haulers to your specific needs.



Volvo A45G FS in detail

Engine

16 liter, 6-cylinder straight turbocharged diesel engine with 4 valves per cylinder, overhead camshaft and electronically controlled unit injectors. The engine has wet replaceable cylinder liners and replaceable valve guides and valve seats.

Engine model	Volvo	D16
Max power - SAE J1995 Gross	kW	357
	hp	485
at engine speed	r/min	1800
Flywheel power - ISO 9249, SAE J1349 Net	kW	354
	hp	481
at engine speed	r/min	1800
Max torque - SAE J1995 Gross	Nm	2 576
Max torque - ISO 9249, SAE J1349 Net	Nm	2 551
at engine speed	r/min	1 0 5 0
Displacement	I	16.1

Electrical System

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

Voltage	V	24
Battery	V	2x12
Battery capacity	Ah	2x225
Alternator	kW/A	3.396/120
Starter motor	kW	9

Drivetrain

Torque converter with built-in lock-up function.

Transmission: Fully automatic Volvo PowerTronic planetary transmission with nine forward gears and three reverse gears. The transmission ability to skip gears for fast and accurate gear selection. **Dropbox:** Volvo-developed, in-line design with high ground clearance and 100% longitudinal "dog clutch" type differential lock. **Axles:** Heavy duty, purpose built Volvo design with fully floating axle shafts, planetary type hub reductions and 100% dog clutch type diff-lock. Automatic traction control system (ATC)

Automatic traction control system (ATC).

Torque converter		2.1:1
Transmission	Volvo	PT 2529
Dropbox	Volvo	IL2 ATC
Axles	Volvo	ARB H40

Brake system

Fully hydraulic, wet multiple disc brakes with enclosed, forced oil-cooled multiple discs on all wheels. Two circuit brake system. Complies with ISO 3450 at total machine weight. **Circuit division**: One circuit for front axle and one for bogie axles. **Parking brake**: Spring-applied disc brake acting on the trailer unit propeller shaft. When the parking brake is applied, the longitudinal differential locked.

Retarder: Service brake retarder function and Volvo Engine Brake (VEB). Steering System

Hydro-mechanical articulated steering, self compensating design. Two double-acting steering cylinders.	
Steering angle: 3,4 steering wheel turns lock-to-lock, ±45°.	
Steering system, including secondary steering fulfi lls ISO 5010.	
Chassis	
Frames: how type, heavy duty. High strength steel, robot welded	

Rotating hitch: 100% maintenance free, fully sealed, with permanently greased tapered roller bearings.

Cab

Cab			
Mounted on rubber pads. Ergonomically design Wide angle forward view. Operator centerally positioned above the front a seat with retractable seat belt. Tilt/telescopic steering wheel. Ergonomically pr air. Climate control system. Operator communication system: Contronics. Large color display, user-friendly and easy-to-un vital machine functions are constantly monitore Instructor seat with seat belt. Safety: ROPS/FOPS standards approved acco J1040 / ISO3449, SAE J231. Sound level in cab (ISO 6396) - L _{pA} External sound level (ISO 6395) - L _{WA} External sound level with sound kit: 110 dB(A)	axle. Adjusta ositioned cor nderstand im rd. ording to ISC dB dB	ble operators htrols. Filtered formation, all	
Hydraulic system			
Pumps : Four variable displacement piston pumps driven by the flywheel PTO. Two load-sensing used for steering and tipping and two electrical controlled used for fan, brake cooling and brake power supply. One ground-dependent piston pump for secondary steering mounted on the dropbox. Two return oil filters with magnetic cores provide effective oil filtration.			
System max working pressure	MPa	26	
Dumping System Patented Load and Dump Brake.			
Dumping Cylinders: two single stage double a	cting cylinde		
Tipping angle	Ū	70	
Tipping time with load	S	12	
Lowering time	S	10	
Body			
Plate thickness			
Front	mm	8	
Sides	mm	11	
Bottom	mm	14	
Chute	mm	16	
Material		HB450 steel	
Yield strength	N/mm²	1 150	
Tensile strength	N/mm²	1 350	
Load Capacity			
Standard Body			
Load capacity	kg	41 000	
Body, struck	m³	19.7	
Body, heaped 2:1	m³	25.1	
With overhung tailgate			
Body, struck	m³	20.2	
Body, heaped 2:1	m³	26.2	
Suspension			
Unique, full hydraulic, on all wheels with autom Part of the machine's hydraulic system, uses th			
Hydraulic cylinders (struts), front/rear	,	2/4	
Accumulators, oil-nitrogen, high pressure, from	ıt	2	
Accumulators, oil-nitrogen, high/low pressure, re	ear	2/2	
Levelling sensors		2+2+2	

Specifications

REFILL CAPACITIES		
Crankcase	I	55
Fuel tank	I	480
Cooling system	I	49
Brake cooling system	I	188
Transmission	I	43
Dropbox	I	9
Axles, front/bogie	I	26/52
Hydraulic tank	I	210

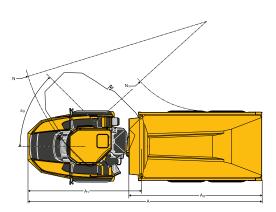
OPERATING WEIGHT UNLOADED			
Tires		29.5R25*	
Front	kg	17 000	
Rear	kg	14 900	
Total	kg	31 900	
Payload	kg	41 000	

Operating weight includes all fluids and operator

*) A45G FS with tires 875/65R25, add 300 kg/axle

TOTAL WEIGHT		
Tires		29.5R25*
Front	kg	21 150
Rear	kg	51 750
Total	kg	72 900

*) A45G FS with tires 875/65R25, add 300 kg /axle



DIMENSIONS		
Pos	Unit	A45G FS
А	mm	11 263
A ₁	mm	5 476
A ₂	mm	6 404
В	mm	5 844
С	mm	3 599
C1	mm	1 772
D	mm	3 100
D1	mm	2 942
E	mm	1 277
F	mm	4 518
G	mm	1940
Н	mm	1 706
1	mm	495
J	mm	3 200
К	mm	2 435
L	mm	822
М	mm	7 265
Ν	mm	8 957
N ₁	mm	4 327
0	mm	3 430

SPEED			
Forward			
1	km/h	5.8	
2	km/h	8.5	
3	km/h	10.4	
4	km/h	15	
5	km/h	21.6	
6	km/h	27.3	
7	km/h	36.1	
8	km/h	47.8	
9	km/h	57	
Reverse			
1	km/h	6.5	
2	km/h	9.4	
3	km/h	18	

GROUND PRESSURE			·
Tires		29.5R25	875/65R25
Unloaded			
Front	kPa	114	100
Rear	kPa	48	43
Loaded			
Front	kPa	143	125
Rear	kPa	174	152

DIMENSIONS		
Pos	Unit	A45G FS
Р	mm	3 118
Q	mm	2 820
R	mm	613
R ₁	mm	640
S	mm	2 651
Т	mm	3 427
U	mm	3 546
V	mm	2 636
W	mm	3 403
Х	mm	553
X1	mm	640
X ₂	mm	788
Y	mm	2 636
Z	mm	3 403
a ₁	0	25
a ₂	0	70
a ₃	0	45

A45G FS: Unloaded machine with 29.5R25 tires.

Equipment

STANDARD EQUIPMENT	STANDARD EQUIPMENT
Engine	Comfort
Direct injected, electronically controlled, turbocharged, intercooled	ACC control panel
Grouped oil filters	Ashtray
Preheater for easier cold starts	Cab heater with filtered fresh air and defroster
VEB (exhaust retarder EPG + compression brake)	Can holder /storage tray
Tires	Instructor seat with seat belt
29.5R25	Overhead console for radio
Drivetrain	Sliding window
6x4 and 6x6 automatically engaged drive modes	Space for lunch cooler
Dog clutch type 100% diff-locks in all axles	Storage box
Full automatic transmission	Sun visor
Dropbox with longitudinal diff-lock	Tilt/telescopic steering wheel
Torque converter with automatic lock-up	Tinted glass
Electrical System	Operator information interface
120 A alternator	Gauges:
Battery disconnect switch	Brake pressure
Extra 24 V socket for lunch cooler	Fuel
Lights:	Speedometer
Back-up light	Tachometer
Brake lights	Wet disc brakes cooling oil temperature
Cab lighting	Warning lights grouped and easy to read
Direction indicators	Central warning (3 levels) for all vital functions
Headlights	Central positioned information display
Instrument lighting	Automatic pre-start checks
Parking lights	Clock
Rear lights	Hour meter
Brake system	Operational information, easy-to-navigate menu
Hill assist	Troubleshooting diagnostics
Load & Dump Brake	Exterior
Retarder pedal	Front mudguard wideners and rear mudflups
Parking brake on propeller shaft	Service and maintenance
Two circuit, fully hydraulic, wet discs on all axles	Electrical engine hood
Body	Drainage hose
Body prepared for exhaust heating and optional equipment	Machine Tracking Information System MATRIS
Safety	Service platform integrated in the front grill
Anti-slip steps and platforms	Tool box
Dump body lock	
Handrails on steps and platforms	
Hazard lights	
Horn	
Protective grill for cab rear window	
Rear-view mirrors	
Retractable 3-inch safety belt	
ROPS/ FOPS - certified cab	
Secondary steering	
Steering joint lock	

Windshield wipers with interval function Dump support system

Windshield washers

OPTIONAL EQUIPMENT	
ngine	
Air pre-cleaner, cyclone type	
Air pre-cleaner, oil-bath type	
Air filter, heavy duty, EON	
Engine heater, 240 V	
Engine heater, diesel (Eberspächer)	
Engine auto shutdown	
Engine shutdown timer	
External emergency engine stop	
Fuel filter, extra	
High engine idle speed	

OPTIONAL EQUIPMENT	OPTIONAL EQUIPMENT Body		
Tires			
875/65R25	Body exhaust heating		
Electrical System	Front spillguard, extra		
Headlights, LED	Side extension, 200 mm		
Warning beacon, LED	Side extension, light material		
Working lights, halogen	Tailgate, overhung, linkage-operated		
Working lights, LED	Tailgate, overhung, wire-operated		
Entrance light	Tailgate, underhung		
Anti-theft system (pin code)	Wear plates, 450 HB		
Rear view camera	Underground body		
Reverse alarm	Safety		
CAN-BUS interface, extra	Fire suppression system		
Cab	Warning triangle		
Noise reduction kit (fulfils 2000/14/EC)	First aid kit and fire extinguisher		
Anchorage, operator's manual	Fire extinguisher		
Cab heating/ventilation timer	Wheel chocks		
Cable kit, for cab heater 240 V	Service and maintenance		
HEPA cab air filter	Lube system, standard machine		
Bluetooth radio kit	Lube system, tailgate		
Rear view mirrors, adjustable, el.heated	Lubrication hose, ground level greasing		
Seat belt XXL, non-retractable	Tool kit		
Sun blinds, side windows	Other		
Universal key	Siberian kit -40°C		
Air suspended, heated, fully adjustable seat	Arctic oil kit		
Armrest for operator seat	CareTrack		
Headrest for operator seat	Fast fuelling system		
Low profile cab	Jump start connector, NATO -type		
	Frame extension		
	Haul Assist - On-Board Weighing		

Haul Assist - Tire Pressure Monitoring System

SELECTION OF VOLVO OPTIONAL EQUIPMENT

Fire suppression system



LED lighting



Fast fuelling



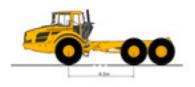
Entrance light



Heavy duty air filter



Hauler chassis



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.

Solutions for you

Our industry leading machines are just the start of your relationship with Volvo. As your partner, we have developed an extensive range of additional solutions to help you improve uptime, boost productivity and reduce costs.

Our portfolio of products and services is designed to complement your machine's performance and boost your profitability. Simply put, we offer some of the best guarantees, warranties and technological solutions in the industry today. Below are just some examples. Talk to your dealer to find out and discuss the right fit for you!

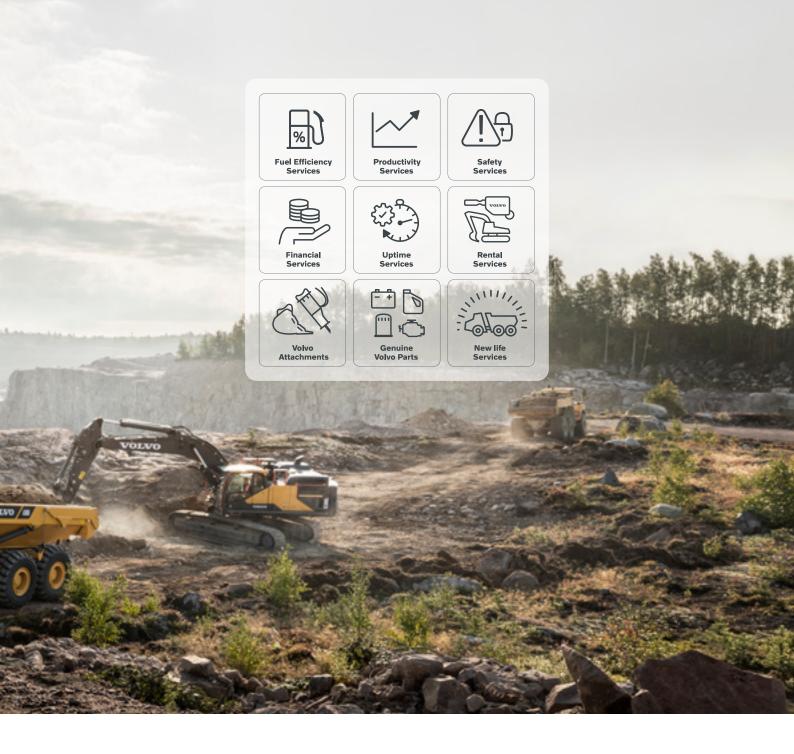


Get the most from your machine

While reliable and efficient machines of course play a vital role in reducing costs, enhancing safety and maximizing productivity, it is ultimately the performance of the operator that really makes the difference. We offer a range of training initiatives to help operators unlock the full capability of their Volvo Articulated Hauler.

Connected to Uptime

Maximize machine uptime and reduce repair costs with the CareTrack telematic system. Choose to keep track of your machine yourself or let us take care of it with ActiveCare. Our Volvo Uptime Center will provide 24/7 machine monitoring, supplying weekly reports and notifying you should preventive maintenance action be required.



Control your maintenance costs

Stay on track with planned servicing and keep your asset covered with our range of flexible maintenance and repair agreements.

Optimize site efficiency

Using Volvo Site Simulation, we can help you make on-site logistics more efficient and lower your cost per tonne. Get recommendations on the best fleet configuration and site set-up to maximize profitability.

Genuine Volvo Parts

Maintain productivity and machine uptime with our range of readily available, tested and approved parts – all backed by Volvo warranty. Only by using Genuine Volvo Parts, can you protect your investment, extend machine life and guarantee long-lasting performance.

VOLVO