

V O L V O



Volvo Articulated Haulers 55 t 639 hp

**A60H**

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.

**1966**

**DR631 "Gravel Charlie"**  
The world's first series manufactured articulated hauler

**1967**

**DR 860**  
3-axle machine with unique bogie concept

**1979**

**5350**  
Featuring fully automatic transmission, unique suspension system and class leading cab with low noise level

**1993**

**A25C**  
The first articulated hauler with low emission engine as standard

**1995**

**A40**  
Product range from 20t to 40t

**2000**

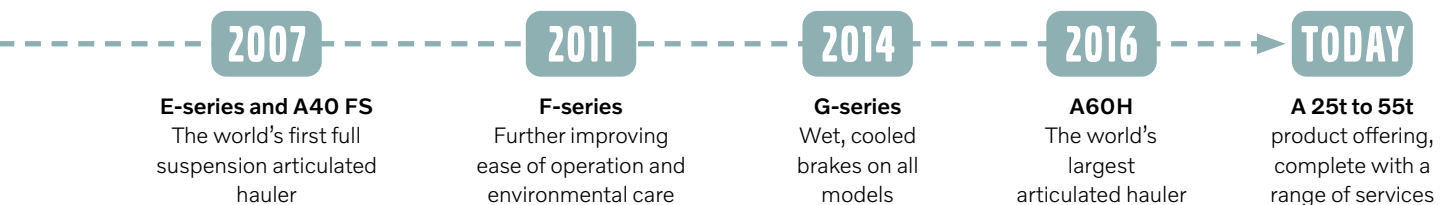
**D-series**  
Built with a focus on the operator



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



# 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.



## 1,000hr engine service intervals

Volvo Engine Oil and High Performance Filters offer 1000 hour engine service intervals. The result is 50% less oil and filters – reducing maintenance requirements as well as your environmental impact.



## 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.





*Reduce your maintenance costs with Volvo  
Articulated Haulers.*



# 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.





*The perfect Assist-ant to help get the most of your Volvo Articulated Haulers.*



Watch our Haul Assist video ▶



# 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.

# Bigger and bolder

With 100% off-road performance, proven Volvo technology and impressive payload, count on the Volvo A60H Articulated Hauler to boost your profits.

## Comfort at speed

The A60H is fitted with active hydraulic front suspension – permitting high hauling speeds in tough conditions. This optimizes operator comfort and stability during travel.



## Unbeatable off-road performance

The ground-breaking A60H is the best articulated hauler on the market. With matched drivetrain, automatic drive combinations including 100% differential locks, all-terrain bogie and hydro-mechanical steering, this machine is unbeatable.



## Articulated hauler concept

Go where others can't. The A60H embodies the full articulated hauler concept and provides total versatility so you can access the entire jobsite and climb steeper gradients. Work in all seasons, terrains and applications using tailored machine configurations and tires, optimized for this 60 tonne machine.







*Volvo Articulated Haulers deliver  
the highest profitability.*



# MOVE MORE FOR LESS

Reach your production targets faster and reduce your cost per tonne with the Volvo A60H. The largest articulated hauler on the market offers up to 40% more productivity along with outstanding fuel efficiency.

# Control in comfort

The industry-leading cab appeals to operators and helps maintain productivity all day, every day.

## Total control

Stay in control at all times. The dump support system, dynamic Volvo engine brake, load and dump brake and hill assist, all help the operator to control the machine for extra productivity and safety.



## Ease of operation

The ergonomic, comfortable and easy-to-understand controls are designed to suit all operators, combined with automatic functions for increased ease of operation.



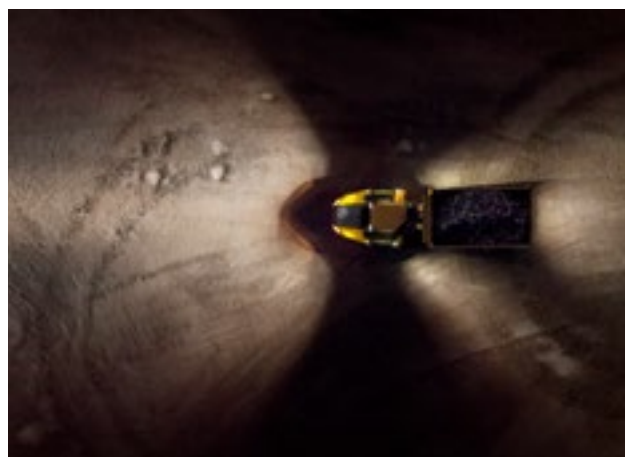
## Operator comfort

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.





*Volvo Articulated Haulers are the operator's number one choice.*



# 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.

# Simply the best and the biggest

## Only from Volvo

- Proven Volvo engine and matched driveline: high performance, high fuel efficiency
- Automatic drive combinations including 100% differential locks, all-terrain bogie and hydromechanical steering
- Active hydraulic front suspension for high hauling speeds in tough conditions
- The largest articulated hauler on the market, delivering 40% more productivity

## The operator's choice

- Ease of operation: ergonomic and easy-to-understand controls
- Centrally positioned operator for best-in-class visibility
- Hill assist, dump support system, load and dump brake
- 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



## 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

## Service and maintenance

- 250-hour greasing interval
- Half the fluid volume compared to the competition
- 1,000hr engine service intervals
- Service reminders and fluid level monitoring
- Industry-leading service access and ground-accessible 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
<b>Dealing with height restrictions?</b> Operating in restricted height conditions e.g. silos or underground	No	Select standard body
	Yes	Select low profile body
<b>Hauling abrasive material?</b> Granite, silicate etc	No	<i>Go to next question</i>
	Yes	Select wear plates / rock liners for extended service life
<b>What material density?</b> Gravel is ~1.65 ton/m <sup>3</sup>	> 1.5 ton/m <sup>3</sup> (gravel, blasted rock)	<i>Go to next question</i>
	1.1 - 1.5 ton/m <sup>3</sup> (dry earth, shale)	Select side extensions to increase body volume
	< 1.0 ton/m <sup>3</sup> (coal, fly ash etc)	Select light material kit to increase body volume
<b>Front spill protection needed?</b> Getting loaded by large excavator	No	<i>Go to next question</i>
	Yes	Select front spillguard
<b>Extra load retention needed?</b> Risk of dropping material e.g. when climbing steep inclines	No	<i>Go to next question</i>
	Yes, but not hauling boulders	Select tailgate – overhung type – to reduce spillage
	Yes, hauling boulders	Select tailgate – underhung type – to reduce spillage
<b>Hauling sticky material?</b> Risk of carry-back	No	<i>Go to next question</i>
	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
<b>Operating on abrasive haulroad?</b> Risk of tire cuts or extensive wear	No	E3 tires are optimized for soft ground, offering the best traction and high average speed
	Yes	Select E4 tires for the best cut resistance, comfort and tread life
<b>Extra flotation needed?</b> 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

Volvo Excavator	EC480	EC530	EC550	EC750	EC950
	Number of passes				
A60H	11	9	8	7	5

- 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 Wheel Loader	L220	L260	L350
	Number of passes		
A60H	6	5	4

- 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 A60H in detail

## Engine

V-ACT, 16 liter, 6-cylinder straight VGT (Variable Geometry Turbocharged) diesel engine with 4 valves per cylinder, overhead camshaft and electronically controlled unit injectors. It has wet replaceable cylinder liners and replaceable valve guides and valve seats.

The engine has cooled EGR (Exhaust Gas Recirculation) and exhaust after treatment with EAT-Muffler (Exhaust After treatment) including DOC (Diesel Oxidation Catalyst), DPF (Diesel Particulate Filter) and SCR (Selective Catalytic Reduction) with an electronically controlled UDS (Urea Dosing System).

After treatment system features passive DPF regeneration with an AHI (After treatment Hydro carbon Injection) device as back up.

Engine model	Volvo D16J (Stage V)	
Max power - SAE J1995 Gross	kW	470
	hp	639
at engine speed	r/min	1800
Flywheel power - ISO 9249, SAE J1349 Net	kW	467
	hp	635
at engine speed	r/min	1800
Max torque - SAE J1995 Gross	Nm	2 960
Max torque - ISO 9249, SAE J1349 Net	Nm	2 942
at engine speed	r/min	1 050
Displacement	l	16.1

## 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	V	24
Battery	V	2x12
Battery capacity	Ah	2x225
Alternator	kW/A	2.264/80
Starter motor	kW	9

## Drivetrain

Torque converter with built-in lock-up function.

**Transmission:** Fully automatic Allison planetary transmission with 6 forward gears and 2 reverse gears. Internal torsional damper in the torque converter.

**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).

Torque converter	1.85:1	
Transmission	Volvo	6630 ORS
Dropbox	Volvo	IL3 ATC
Axles	Volvo	AHW80

## 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 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.

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

## Steering System

Hydro-mechanical articulated steering, self compensating design. Two double-acting steering cylinders.

**Rotating angle:** 3,4 steering wheel turns lock-to-lock,  $\pm 45^\circ$ .

Steering system, including secondary steering fulfills ISO 5010.

## Chassis

**Frames:** box type, heavy duty. High strength steel, robot welded.

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

## Cab

Mounted on rubber pads. Ergonomically designed. Easy entry and exit. Wide angle forward view.

Operator centrally positioned above the front axle. Adjustable operators seat with retractable seat belt.

Tilt/telescopic steering wheel. Ergonomically positioned controls. Filtered air. Climate control system.

**Operator communication system:** Contronics.

Large color display, user-friendly and easy-to-understand information, all vital machine functions are constantly monitored.

Instructor seat with seat belt.

**Safety:** ROPS/FOPS standards approved according to ISO3471, SAE J1040 / ISO3449, SAE J231.

Sound level in cab (ISO 6396) - L <sub>pA</sub>	dB	72
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External sound level (ISO 6395) - L <sub>WA</sub>	dB	113
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Internal sound level with sound kit: 70 dB(A)

External sound level with sound kit: 111 dB(A).





### Hydraulic system

**Pumps:** Five variable displacement piston pumps driven by the flywheel PTO.  
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	28
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### Dumping System

Patented Load and Dump Brake.

**Dumping Cylinders:** two single stage double acting cylinders.

Tipping angle	°	70
Tipping time with load	s	13
Lowering time	s	10

### Body

#### Plate thickness

Front	mm	8
Sides	mm	14
Bottom	mm	16
Chute	mm	16

**Material** HB400 steel

Yield strength	N/mm <sup>2</sup>	1 000
Tensile strength	N/mm <sup>2</sup>	1 250

### Load Capacity

#### Standard Body

Load capacity	kg	55 000
Body, struck	m <sup>3</sup>	25.8
Body, heaped 2:1	m <sup>3</sup>	33.6

#### With overhung tailgate

Body, struck	m <sup>3</sup>	26.5
Body, heaped 2:1	m <sup>3</sup>	35.1

### Suspension

**Front suspension:** Unique, full hydraulic, with automatic leveling and stabilizer.

**Rear suspension:** 100% maintenance free. Straddle mounted bogie beam. Independent wheel movement via a 3-point mounting system.

Hydraulic cylinders (struts), front/rear	2/0
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Accumulators, oil-nitrogen, high pressure, front	2
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Levelling sensors	2
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# Specifications

## REFILL CAPACITIES

Crankcase	l	55
Fuel tank	l	750
Cooling system	l	75
Brake cooling system	l	131
Transmission	l	58
Dropbox	l	12
Axles, front/bogie	l	74/147
Hydraulic tank	l	198
DEF/AdBlue®	l	60

®registered trademark of the Verband der Automobilindustrie e.V. (VDA)

## SPEED

Forward		
1	km/h	7
2	km/h	10
3	km/h	13
4	km/h	19
5	km/h	26
6	km/h	55
Reverse		
1	km/h	5
2	km/h	8

## OPERATING WEIGHT UNLOADED

Tires		33.25R29
Front	kg	22 750
Rear	kg	21 000
Total	kg	43 750
Payload	kg	55 000

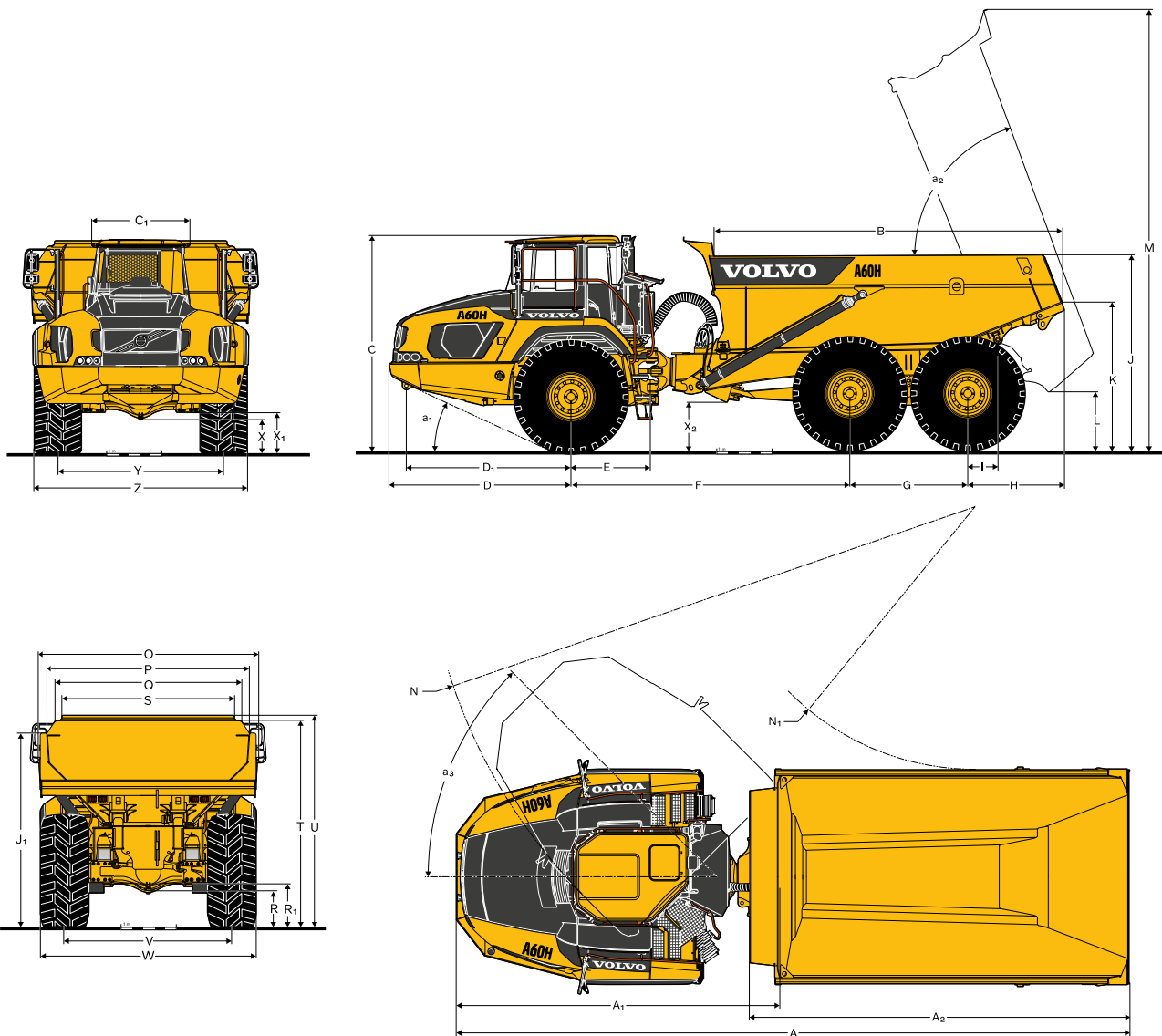
Operating weight includes all fluids and operator

## TOTAL WEIGHT

Tires		33.25R29
Front	kg	28 900
Rear	kg	69 850
Total	kg	98 750

## GROUND PRESSURE

Tires		<b>33.25R29</b>
Unloaded		
Front	kPa	125
Rear	kPa	58
Loaded		
Front	kPa	159
Rear	kPa	193



#### DIMENSIONS

Pos	Unit	A60H
A	mm	12 225
A <sub>1</sub>	mm	5 872
A <sub>2</sub>	mm	6 900
B	mm	6 310
C	mm	3 852
C <sub>1</sub>	mm	1 772
D	mm	3 293
D <sub>1</sub>	mm	2 986
E	mm	1 440
F	mm	5 050
G	mm	2 140
H	mm	1 743
I	mm	541
J	mm	3 510
K	mm	2 658
L	mm	1 030
M	mm	7 960
N	mm	10 014
N <sub>1</sub>	mm	4 761
O	mm	3 989

#### DIMENSIONS

Pos	Unit	A60H
P	mm	3 673
Q	mm	3 370
R	mm	677
R <sub>1</sub>	mm	778
S	mm	3 126
T	mm	3 734
U	mm	3 833
V	mm	3 010
W	mm	3 884
X	mm	601
X <sub>1</sub>	mm	727
X <sub>2</sub>	mm	845
Y	mm	3 010
Z	mm	3 884
a <sub>1</sub>	°	24.9
a <sub>2</sub>	°	70
a <sub>3</sub>	°	45

A60H: Unloaded machine with 33.25R29 tires.

# Equipment

## STANDARD EQUIPMENT

### Engine

Direct injected, electronically controlled, turbocharged, intercooled  
 Grouped oil filters  
 Preheater for easier cold starts  
 VEB (exhaust retarder EPG + compression brake)

### Tires

33.25R29  
 800/80R29

### Drivetrain

6x4 and 6x6 automatically engaged drive modes  
 Dog clutch type 100% diff-locks in all axles  
 Full automatic transmission  
 Two-stage dropbox with longitudinal diff-lock  
 Torque converter with automatic lock-up

### Electrical System

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

### Brake system

Hill assist  
 Load & Dump Brake  
 Retarder pedal  
 Parking brake on propeller shaft  
 Two circuit, fully hydraulic, wet discs on all axles

### Body

Body prepared for exhaust heating and optional equipment  
 On board weighing (OBW)

### Safety

Anti-slip steps and platforms  
 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 washers  
 Windshield wipers with interval function  
 Dump support system

## STANDARD EQUIPMENT

### Comfort

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

### Operator information interface

Gauges:  
 Brake pressure  
 Fuel  
 Speedometer  
 Tachometer  
 Wet disc brakes cooling 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  
 Clock  
 Hour meter  
 Operational information, easy-to-navigate menu  
 Troubleshooting diagnostics

### Exterior

Front mudguard wideners and rear mudflaps

### Service and maintenance

Electrical engine hood and belly plate  
 Drainage hose  
 Machine Tracking Information System MATRIS  
 Service platform integrated in the front grill  
 Tool box

## OPTIONAL EQUIPMENT

### Engine

Air filter, heavy duty, EON  
 Engine heater, 240 V  
 Engine heater, diesel (Eberspächer)  
 Engine auto shutdown  
 Engine shutdown timer  
 External emergency engine stop  
 High engine idle speed

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**OPTIONAL EQUIPMENT**

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**Electrical System**

Headlights, LED  
Warning beacon, LED  
Working lights, LED  
Entrance light  
Seat belt indicator, external  
Anti-theft system (pin code)  
Rear view camera  
Reverse alarm  
CAN-BUS interface, extra

**Cab**

Noise reduction kit (fulfils 2000/14/EC)  
Anchorage, operator's manual  
Cab heating/ventilation timer  
Cable kit, for cab heater  
HEPA cab air filter  
Bluetooth radio kit  
Rear view mirrors, adjustable, el.heated  
Seat belt XXL, non-retractable  
Sun blinds, side windows  
Universal key  
Air suspended, heated, fully adjustable seat  
Armrest for operator seat  
Headrest for operator seat  
Air blow gun

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**OPTIONAL EQUIPMENT**

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**Body**

Body exhaust heating  
Front spillguard, extra  
Side extension, light material  
Tailgate, overhung, wire-operated  
Wear plates

**Safety**

Fire suppression system  
Warning triangle  
First aid kit and fire extinguisher  
Fire extinguisher  
Wheel chocks

**Service and maintenance**

Lube system, standard machine  
Tool kit

**Other**

Siberian kit -40°C  
Arctic oil kit  
CareTrack  
Fast fuelling system  
Jump start connector, NATO -type  
Haul Assist - Tire Pressure Monitoring System  
Hauler chassis (without body)

**SELECTION OF VOLVO OPTIONAL EQUIPMENT****Fire suppression system****Fast fuelling****Auto lube****Wheel chocks****Hauler chassis****Wear plates**

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!

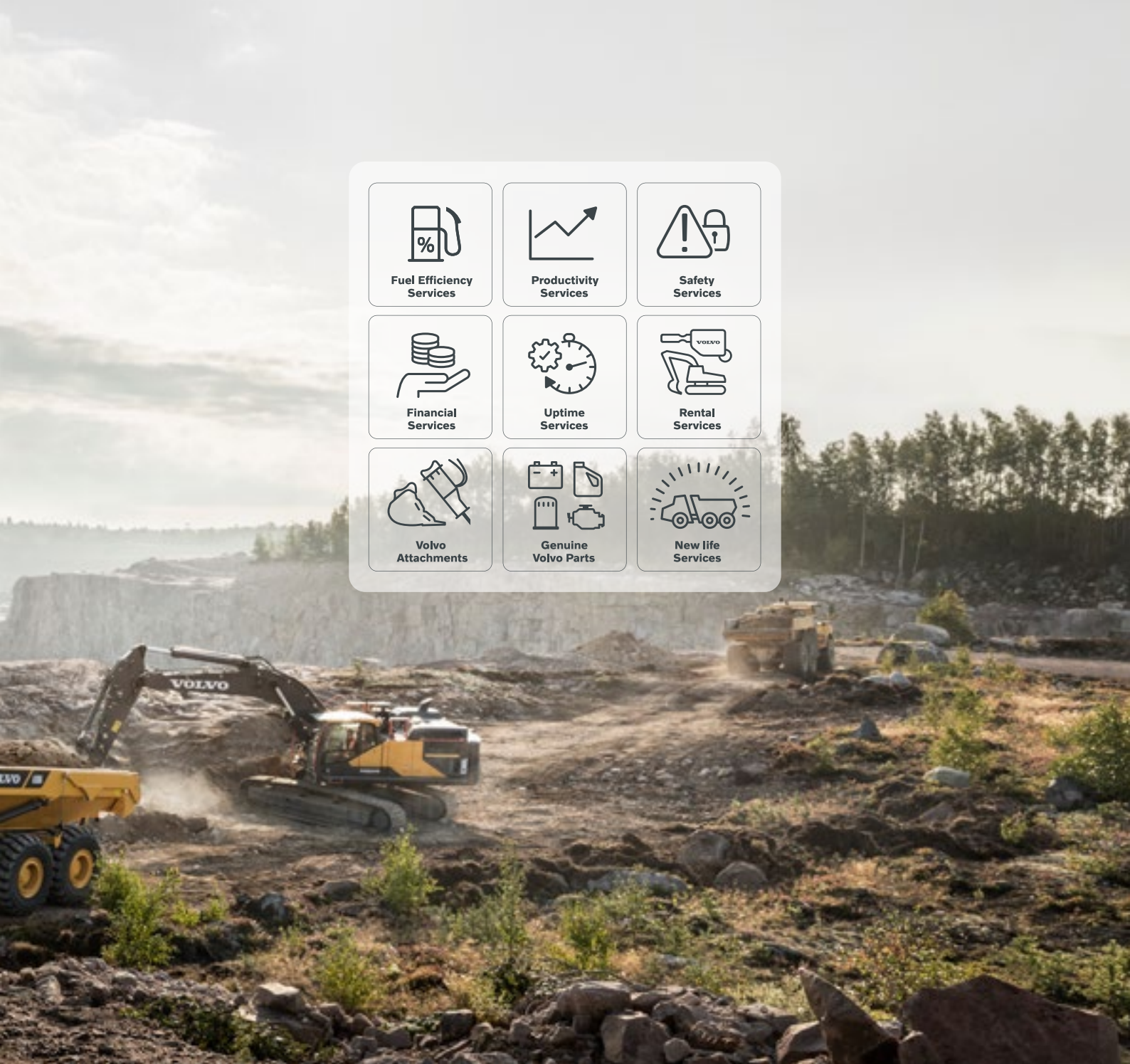


## Get the most from your machine

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.



**Fuel Efficiency Services**



**Productivity Services**



**Safety Services**



**Financial Services**



**Uptime Services**



**Rental Services**



**Volvo Attachments**



**Genuine Volvo Parts**



**New life Services**

### **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.

**V O L V O**