

Item # 75

Volvo EC160E Crawler Excavator

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Model: Volvo EC160E Crawler Excavator

Description	Article
Volvo EC160EL Crawler Excavator	EC160EL
Boom, 17' 1" (5.2m), GP	XC10119
Arm, 9' 10" (3.0m), GP	XC10224
Linkage with lifting eye, GP	XC10403
Decal Kit NA	XC10503
Track Pads, 24" Triple Grouser	XC20102
Roller guard STD	XC20205
Lower frame - foldable steps	XC20302
Belly Cover STD, 4.5mm	XC20401
Engine NA	XC30101
Cooling System High Capacity	XC30202
Air precleaner, Cyclone	XC30401
Anti-vandal mounting on Cab	XC40112
CareCab w/ Opening Hatch	XC40103
Seat, Air suspension w/Heater & X-Isolator	XC40203
Seat Belt, 3 inch Retractable	XC41204
Joystick, 4 Switches	XC40405
Air conditioning, ACC (automatic climate control)	XC40502
Universal key	XC40602
Radio with MP3, USB port & Bluetooth	XC40708
Work lights on deck & boom, Halogen	XC50000
Extra Work Lights on cab front/rear, CWT & boom (Halogens if XC50000 is chosen, LEDs if XC50001)	XC50101
Travel alarm	XC50102
Rear view camera	XC50108
Side view camera	XC50119
CareTrack GSM+SAT	XC50402
CareTrack 6 yr subscription	XC50404
SAT deactivation	XC50406
Hydraulic oil ISO VG46	XC60102
X1 2-Pump Double Acting Piping	XC60203
X1 2-Switch Control, On/Off, Double Acting	XC60502
Pre-Setting for Hydraulic Pressure	XC61301
Manual, English	XC70302
Lifetime Frame	XC70501
Counterweight, 7060lbs (3200kg), fabrication	XC80153
Under cover HD, 4.5mm superstructure	XC80202
Less Bucket With Pins	XC8291084

Volvo Construction Equipment
Building Tomorrow



EC160E

Volvo Excavators 16.5-20.7 t / 36,266-45,592 lb 148 hp



A passion for performance

At Volvo Construction Equipment, we're not just coming along for the ride. Developing products and services that raise productivity – we are confident we can lower costs and increase profits for customers around the globe. Part of the Volvo Group, we are passionate about innovative solutions to help you work smarter – not harder.

Helping you to do more

Doing more with less is a trademark of Volvo Construction Equipment. High productivity has long been married to low energy consumption, ease of use and durability. When it comes to lowering life-cycle costs, Volvo is in a class of its own.

Designed to fit your needs

There is a lot riding on creating solutions that are suited to the particular needs of different industry applications. Innovation often involves high technology – but it doesn't always have to. Some of our best ideas have been simple, based on a clear and deep understanding of our customers' working lives.



You learn a lot in 180 years

Over the years, Volvo has advanced solutions that have revolutionized the use of construction equipment. No other name speaks Safety louder than Volvo. Protecting operators, those around them and minimizing our environmental impact are traditional values that continue to shape our product design philosophy.

We're on your side

We back the Volvo brand with the best people. Volvo is truly a global enterprise, one that is on standby to support customers quickly and efficiently – wherever they are.

We have a passion for performance.

A strong, dedicated, capable dealer network

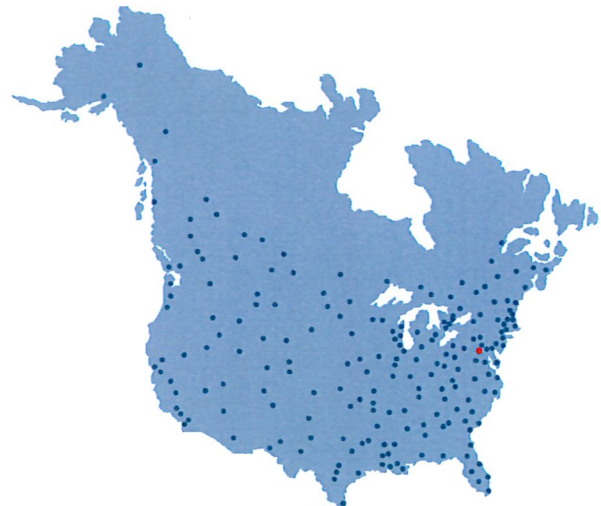
Our dealers are strategically located throughout North America to provide the equipment you need and the parts and service support you demand for a productive and profitable operation.

The strength of our dealer network is enhanced with extensive individualized product support training at our best-in-class Customer Center in Shippensburg and through hands-on training. Using a great Product Demonstration Center featuring a dedicated area for most common applications, visitors operate equipment from our entire product line under a variety of simulated working conditions. This facility is in year-round use by our dealers and customers.

Building the best starts right here.

The products designed and manufactured by Volvo Construction Equipment have their beginnings at the most advanced Research & Design centers in the industry. Volvo CE machines are designed in 11 R&D centers and produced in 15 manufacturing facilities across the world.

The major R&D center and manufacturing plant in the Americas is located in Shippensburg, Pennsylvania. This facility has been in operation for over 30 years and – with its recently added 200,000 sq. ft. expansion – now covers 570,000 sq. ft. on an 80 acre campus. Dedicated work teams and highly advanced technologies and techniques using the Volvo Production System ensure continuous quality improvements, labor savings and cost control to reach the high quality that our customers have come to expect from Volvo.

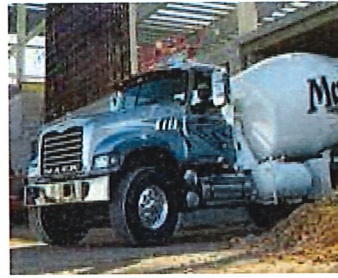




Volvo Trucks



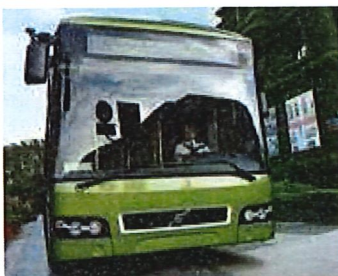
Renault Trucks



Mack Trucks



UD Trucks



Volvo Buses



Volvo Construction Equipment



Volvo Penta



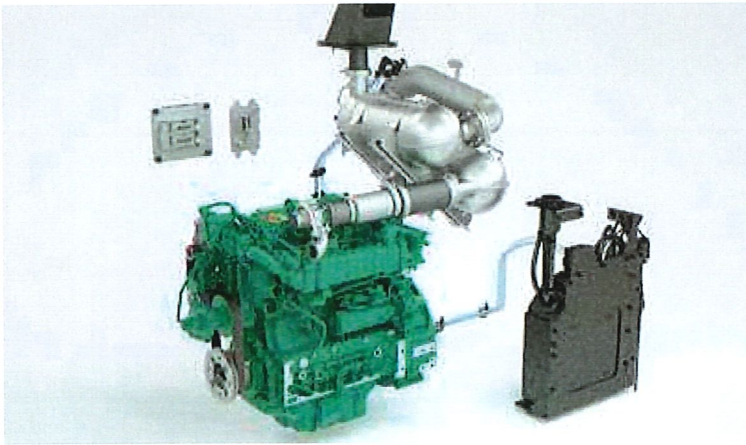
Volvo Financial Services

Effortless Efficiency.

Volvo's new EC160E provides a range of new features to ensure efficiency is a key priority when delivering functions. By carefully considering every duty and component, a machine has been produced that incorporates maximum uptime while also reducing fuel consumption and cycle times – all while delivering elite performance.

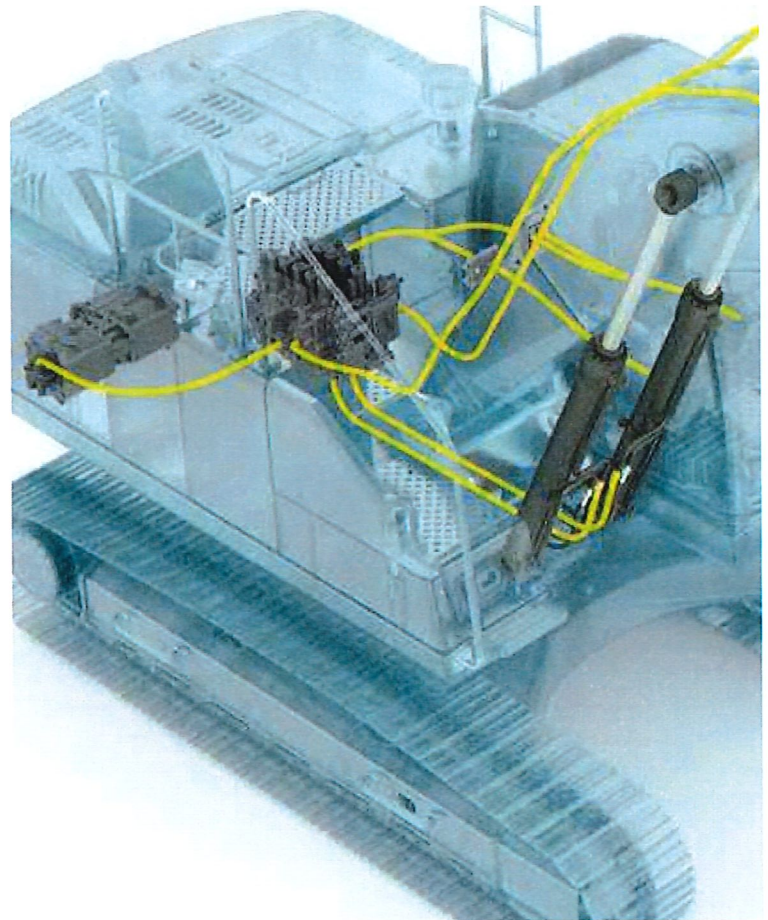
Volvo engine

Featuring proven advanced technology, and built on decades of experience, Volvo's robust D4 Tier 4 Final engine boasts more power - while reducing both fuel consumption and emissions to deliver superior quality, reliability and durability.



Increased power

The increased engine power combined with the increased pump input power creates a highly responsive combined operation and travel. It also produces faster cycle times and low fuel consumption which leads to higher productivity.



Boom float function

With the boom float function, the pump power for boom lowering can be saved or used for other functions, reducing the cycle time. Also, the grading operation can be made easier.

Auto engine shutdown

To reduce fuel consumption, the engine will automatically switch off when the machine is inactive for a pre-set amount of time (five minutes is the default setting).

Main Control Valve and Software

This valve is compatible with software in the machine – building on the already superior controllability by providing a smooth and easy operation. It is also compatible with Volvo's ECO mode – this provides electronic pump control to enhance fuel efficiency.



Optimized hydraulics system

The hydraulics system, combined with the fully electronic control system and advanced ECO mode, has been optimized to work in harmony with D4 Tier 4 Final engine to match the engine power, reduce power loss and improve controllability and response time.



Human Machine Interface (HMI)

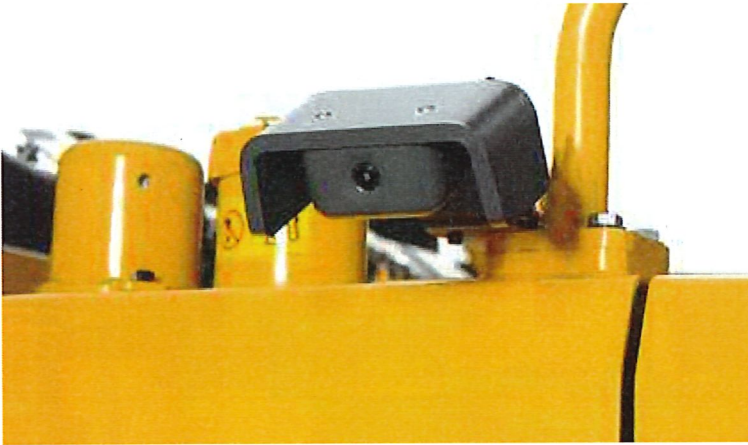
All machine interfaces – including joysticks, keypad, panel and larger LCD monitor – are ergonomically designed for optimum control and efficiency, resulting in increased productivity and workplace wellbeing. The number of switches have been simplified and climate control integrated into the keypad for easy adjustments.

Making hard work easy.

The EC160E has been ergonomically designed for convenience and ease of use, allowing the operator to take control in comfort. The spacious cab design, controls and features are the industry first choice, while aimed at increasing productivity by ensuring the machine takes the strain and not the operator.

Side view camera

As well as the rear view camera, side view camera can be optionally available for customers' comfort. Both views are displayed on the colour monitor, creating a safer working environment, protecting the operator and personnel on the ground.



Short-cut key

For added convenience, functions such as windshield wipers, cameras, auto-mute or power max function can all be assigned a short-cut button on the joystick. This allows the operator to select a function during the application without disruption.



Bluetooth®

To aid operator convenience and support better productivity, you can now connect a Bluetooth device to the machine enabling the handsfree function.



Seatbelt warning alarm

If the seatbelt is not buckled when the ignition key is turned, an alarm is triggered in intervals along with a continuous visual alert. This emphasises our priority for operator safety.

From Strong to Stronger.

The EC160E not only encompasses state-of-the-art design but Volvo also recognises that for technology to be truly innovative, top priorities need to be durability, quality and reliability for every function. This is why care has been taken to ensure every aspect of the machine is built to last while operating at the highest level of productivity.

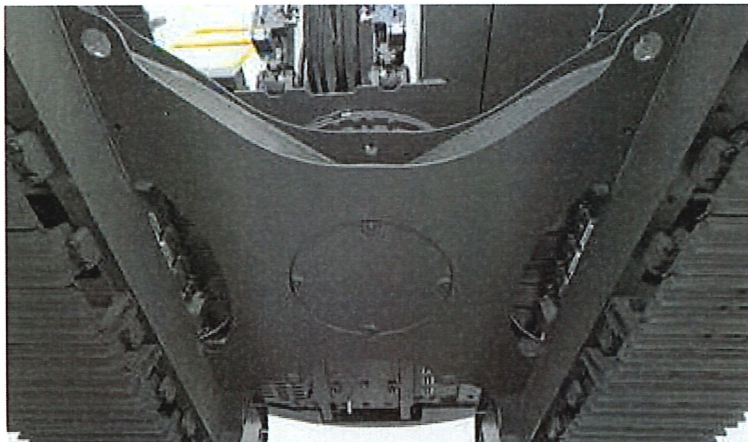
ROPS

The cab features ROPS – this reinforced steel structure ensures the operator is protected in the unlikely event of the machine rolling over, while it also meets the ISO standards for safety.



Boom and Arm

The robust design includes internal plates positioned to support pressure points during the range of applications. This helps disperse the stress from high-pressure areas of the boom and arm, to ensure maximum productivity time after time, during the most demanding applications.



Lower frame

The intelligently designed X-shape lower frame enables even weight distribution increasing stability and durability - preventing damage from rock and debris.



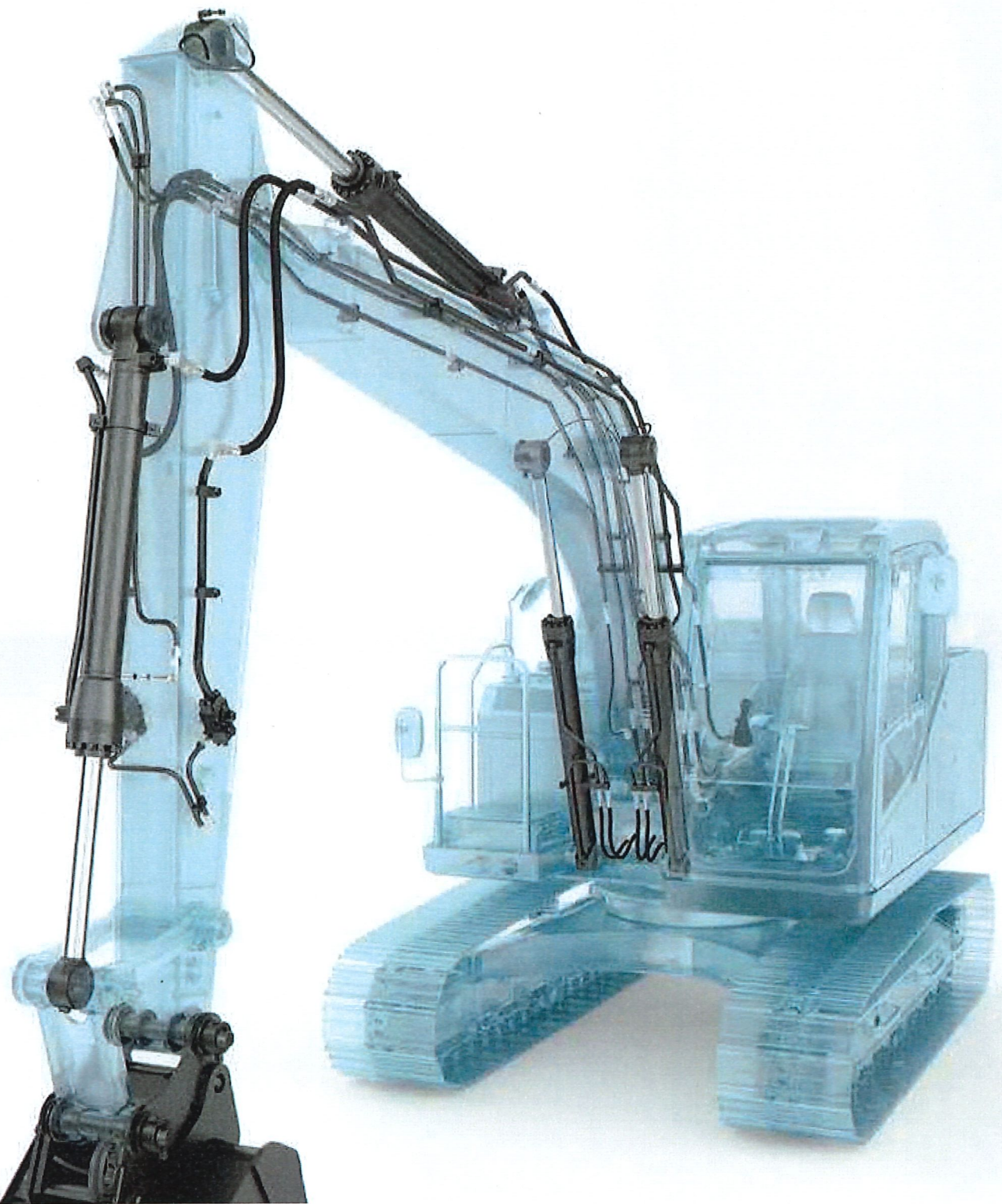
Undercarriage

The idlers, track links, upper and bottom rollers are built to withstand all elements and terrain, to create improved long-lasting durability and support maximum uptime.



Built to last

Working in tough conditions means every component matters - this is why Volvo pays extra attention to each detail during the manufacturing and product design processes. Silicone caulking is used to prevent rust, waterproof harnesses and connections are installed - as well as heavy-duty door hinges and bolted-on protection for the frame-work lights.



Ultimate tool carrier

The machine can be adjusted to take a wide variety of hydraulic lines, which are factory fitted with breaker and shear piping (X1), as well as rotator piping (X3). State-of-the-art auxiliary lines provide the correct flow and pressure for special attachments such as mowers and grinders, shears, crushers and tilt rotators among other attachments. You can choose between the one or two pump flow to maximize profits and productivity.

Fits with Variety.

To maximize customer productivity and profitability, the EC160E has been designed to not only be compatible with a range of attachments, but to enhance their performance by easily and quickly switching to accommodate any needs.

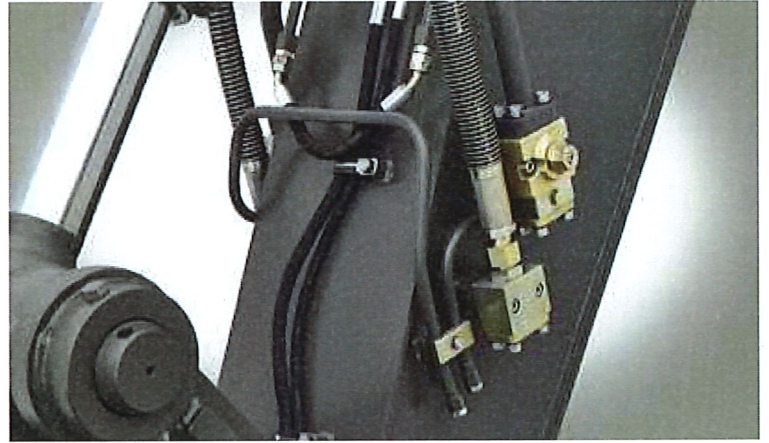
Attachment Management System

The password protected management system allows storage for up to 20 different attachments. It pre-sets and permits hydraulic flow and pressure to be adjusted within the cab, which ensures the use of various attachments for increased versatility.



Extra piping

An additional piping solution is available on the breaker and shear piping (X1), accommodating the use of tilt/rotator attachments.



Electrical pedal

The electric pedal offers precise control to allow the operator to use a wider variety of attachments.



Response mode

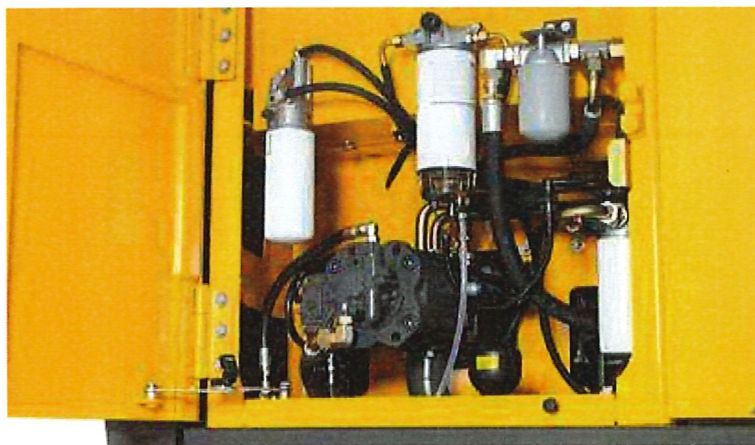
The attachment response sensitivity can be adjusted using the keypad. This allows the operator to tailor machine response for maximum impact in different environments.

Ground Control.

Maintaining a good level of inspection is important for the machine longevity, quicker servicing and maximum uptime – this is the reason Volvo has developed easily accessible maintenance points with added safety precautions.

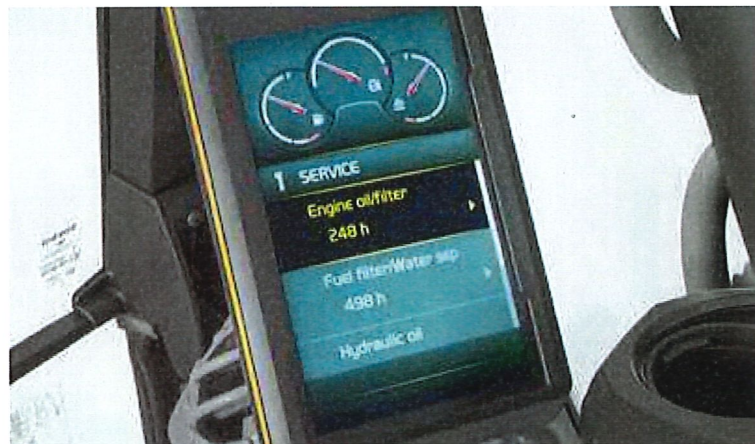
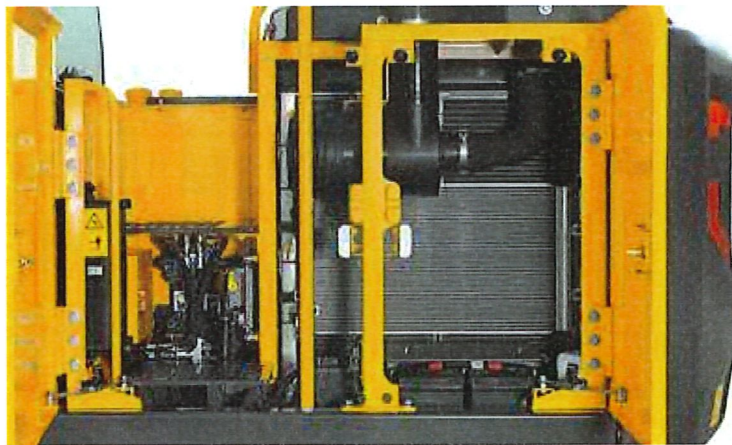
Grouped filters

Filters are well grouped and easily accessible from the ground level. This facilitates the speed and ease of servicing.



Single layer cooling system

The radiator, charged air cooler and hydraulic oil cooler are situated side-by-side on a single layer, to maximize efficiency, reduce blockages and aid cleaning. The system is easily accessed from ground level by simply opening the side door.



Service interval alerts

Real-time service alerts are displayed on the colour monitor to enable diagnostic checks. Separate service intervals include – the engine oil/ filter, fuel filter/water separator, hydraulic oil and hydraulic oil filter. This ensures peace of mind and maximum uptime.



Anti-slip steel plates

Well-positioned punched anti-slip plates provide superior grip and durability. The design facilitates easy cleaning while promoting safety.



Service access

Easy access for maintenance means regular checks are completed faster – increasing uptime and driving down total cost of ownership. The E-series features a new convenient and safe access such as guardrails - to check the hydraulic tank, fuel tank and Diesel Exhaust Fluid (DEF). This is in addition to the easily accessible side entry, through a wide compartment door.



Matched attachments

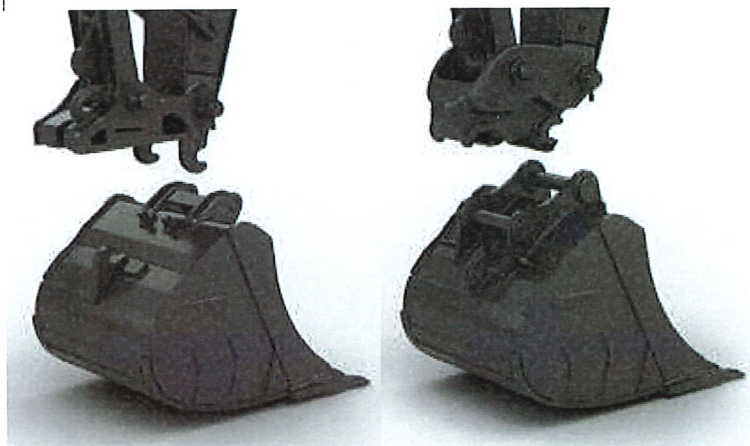
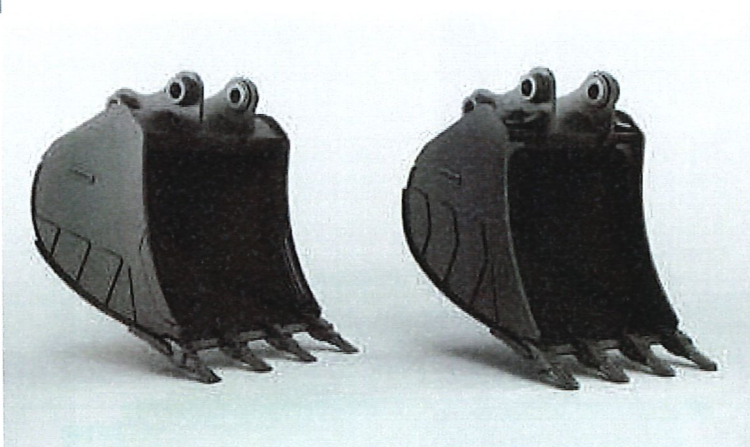
Volvo's durable attachments have been purpose-built to work in perfect harmony with Volvo machines, forming one solid, reliable unit. With functions and properties ideally matched, Volvo attachments are an integrated part of the excavator for which they're intended.

Mix and match for a superior fit.

Maximize your productivity and profitability with Volvo's EC160E crawler excavators and a range of durable attachments. Increase your versatility, access more applications and perform a variety of tasks – all while experiencing faster cycle times and excellent control.

Buckets – GP/HD/XD

Volvo's buckets are the perfect tool for digging and re-handling in all conditions from soft, medium and hard materials. Heavy-duty buckets are intended for productive digging in compact materials. All provide maximum productivity and long life and feature original Volvo wear components.



Quick couplers with front pin lock

Volvo offers a full range of quick couplers, from its dedicated Volvo S-type coupler to the Steelwrist® ones. Both couplers feature Front Pin Lock technology, which allows supreme safety when changing attachments. Those innovative couplers are not only designed to fit perfectly with Volvo excavators but they also comply with the latest safety regulations of ISO 13031 and EN474-1.

Steelwrist® is a registered trademark of Steelwrist AB

Breakers HB18

The HB18 hydraulic breaker is optimized to the specific weights of Volvo machines and tailored to Volvo quick couplers for swift, safe and simple attachment changes. They are available with a full assortment of tools.



Tilt Rotator

Volvo's tilt rotator can be ordered factory installed with multifunctional joysticks and color display that's fully integrated into the machine's system. The new series of Volvo XD excavator buckets are perfectly matched to the factory installed tilt rotator.

Improved total cost of ownership.

Boom and arm

To achieve the best performance, select the most suitable boom and arm configuration combination for your requirements.



Ultimate tool carrier

Designed to not only be compatible with a range of attachments, but also to enhance their performance by easily and quickly switching to accommodate any needs.



Optimized hydraulics

Designed to perfectly match the engine power, reduce power loss, and improve controllability and response time.

Diesel Exhaust Fluid (DEF)

Volvo offers a total DEF solution that is quality assured, cost efficient and easily accessible. Contact your Volvo dealer for more information.

Boom float

The pump power for boom lowering can be saved or used for other functions, reducing the cycle time. Also, the grading operation can be made easier.

Attachment management system

The password protected management system allows storage for up to 20 different attachments. It pre-sets and permits hydraulic flow and pressure to be adjusted within the cab.



Side view camera

Covers the visual blind spot at the side of machine. View is displayed on the colour monitor, creating a safer working environment, protecting the operator and personnel on the ground.

Short cut key function

For ease of use, functions such as windshield wipers, cameras, auto-mute or power max function can all be assigned a short-cut button on the joystick



HMI

All machine interfaces are ergonomically positioned and designed for optimum control and efficiency.

Bluetooth®

Bluetooth and hands-free functions have been added, allowing the operator to connect to wireless functions for increased comfort and safety.



Service access

The E-series features a new convenient and safe access - such as guardrails - to check the hydraulic tank, fuel tank and Diesel Exhaust Fluid. This is in addition to the easily accessible side entry, through a wide compartment door.

Volvo engine

Volvo's D4 Tier 4 Final engine boasts more power while reducing both fuel consumption and emissions; delivering superior quality, reliability and durability.

Grouped filters

Filters are well grouped and easily accessible from the ground level. This facilitates the speed and ease of servicing.



Built to last

All detail - no matter how small - is overlooked. Silicone caulking is used to prevent rust, waterproof harnesses and connections have been installed - as well as heavy-duty door hinges and bolted-on protection for the framework lights.



Adding value to your business.

Being a Volvo customer means having a complete set of services at your fingertips. Volvo can offer you a long-term partnership, protect your revenue and provide a full range of customer solutions using high quality parts, delivered by passionate people. Volvo is committed to the positive return of your investment.



Complete Solutions

Volvo has the right solution for you. So why not let us provide all your needs throughout the whole life

cycle of your machine? By listening to your requirements, we can reduce your total cost of ownership and increase your revenue.



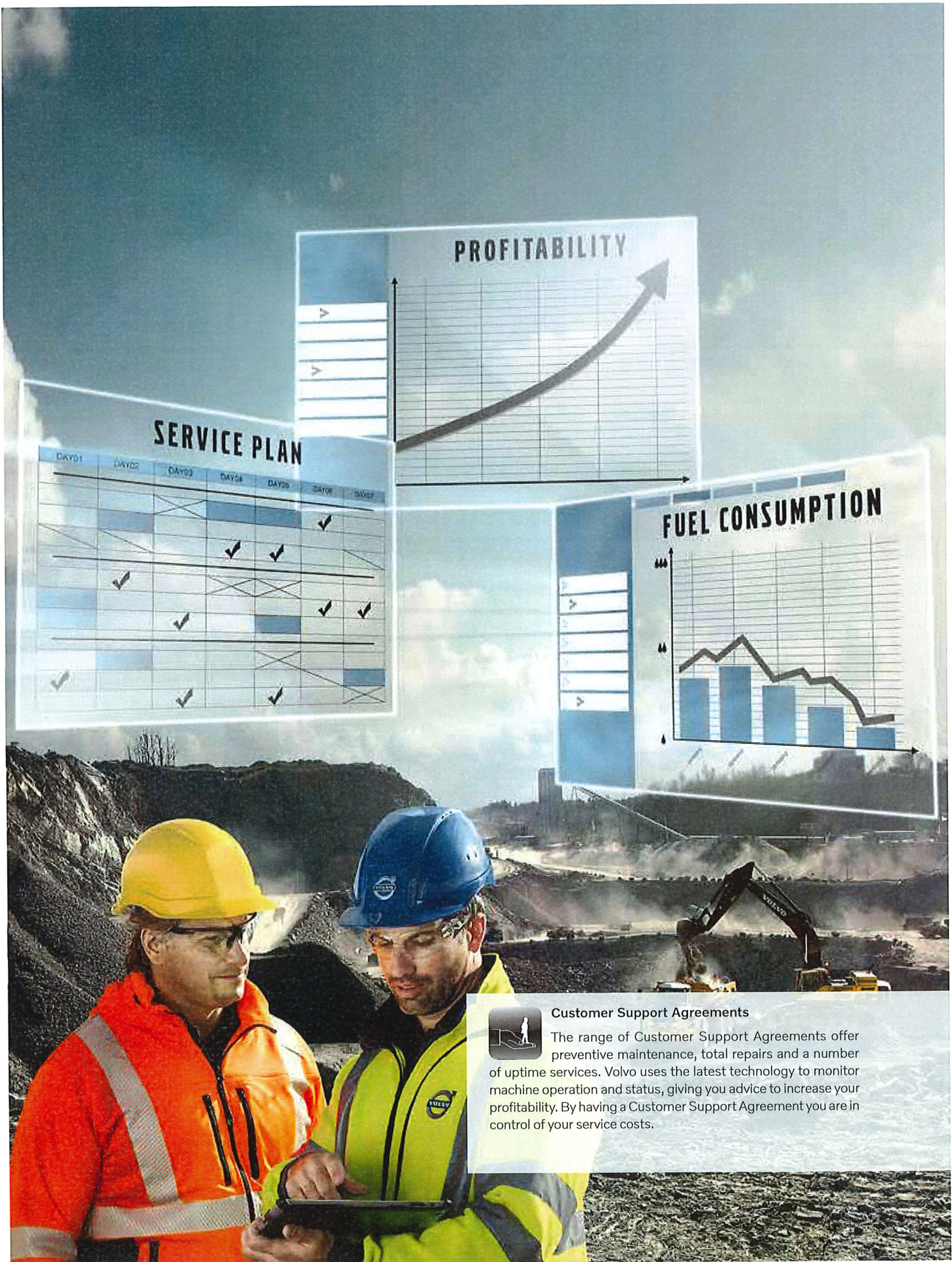
Genuine Volvo Parts

Our attention to detail is what makes us stand out. This proven concept acts as a solid investment in your machine's future. Parts are extensively tested and approved because every part is vital for uptime and performance. Only by using Genuine Volvo Parts, can you be sure that your machine retains the renowned Volvo quality.



Service Network

In order to respond to your needs faster, a Volvo expert is on their way to your job site from one of our Volvo facilities. With our extensive infrastructure of technicians, workshops and dealers, Volvo has a comprehensive network to fully support you using local knowledge and global experience.



Customer Support Agreements

The range of Customer Support Agreements offer preventive maintenance, total repairs and a number of uptime services. Volvo uses the latest technology to monitor machine operation and status, giving you advice to increase your profitability. By having a Customer Support Agreement you are in control of your service costs.

Volvo EC160E in detail.

Engine

The latest generation, Volvo engine Tier 4 Final emissions compliant diesel engine fully meets the demands of the latest, emissions regulations. Featuring Volvo Advanced Combustion Technology (V-ACT), it is designed to deliver superior performance and fuel efficiency. The engine uses precise, high pressure fuel injectors, turbo charger and air-to-air intercooler, and electronic engine controls to optimize machine performance.

Air Filter: 3-stage with precleaner

Automatic Idling System: Reduces engine speed to idle when the levers and pedals are not activated resulting in less fuel consumption and low cab noise levels.

Engine	Volvo		D4J	
Max power at	r/s / r/min	33.3 / 2 000		
* Net, ISO 9249/SAE J1349	kW hp	109 146		
Gross, ISO 14396/SAE J1995	kW hp	110 148		
Max power	Nm lbf ft	609 449		
at engine speed	r/min	1 600		
No. of cylinders		4		
Displacement	l in ³	4.04 247		
Bore	mm in	101 3.98		
Stroke	mm in	126 4.96		

Electrical system

Well protected high-capacity electrical system. Waterproof double-lock harness plugs are used to secure corrosion-free connections. The main relays and solenoid valves are shielded to prevent damage. The master switch is standard. Contronics provides advanced monitoring of machine functions and important diagnostic information.

Voltage	V	24
Batteries	V / Ah	2 x 12 / 100
Alternator	V / Ah	28 / 80
Start motor	V / kW	24 / 5.5

Service refill capacities

Fuel tank	l gal	250 66
Hydraulic system, total	l gal	255 67
Hydraulic tank	l gal	110 29
DEF tank	l gal	20 5
Engine oil	l gal	16 4
Engine coolant	l gal	27 7
Swing reduction unit	l gal	2.6 0.7
Travel reduction unit	l gal	2 x 5.8 2 x 2

Swing system

The swing system uses an axial piston motors, driving a planetary gearbox for maximum torque. An automatic holding brake and antirebound valve are standard.

Max. slew speed	r/min	12.5
Max. slew torque	kNm lbf ft	51.7 38,130

Drive

Each track is powered by an automatic two-speed shift travel motor. The track brakes are multi-disc, spring-applied and hydraulic released. The travel motor, brake and planetary gears are well protected within the track frame.

Max. drawbar pull	kN lbf	152 34,180
Max. travel speed	km/h mph	3.1/5.6 1.9/3.5
Gradeability		35

Undercarriage

Robust X-shaped frame with greased and sealed track chains as standard.

Track shoe		2 x 44
Link pitch	mm in	190 7.5
Shoe width, triple grouser	mm in	500/600/700/800/900 20/24/28/32/36
Bottom rollers		2 x 7
Top rollers		2 x 2

Hydraulic system

The hydraulics system, combined with the fully electronic control system and advanced ECO mode, has been optimized to work in harmony with engine to match the engine power, reduce power loss and improve controllability and response time.

The following important functions are included in the system:

Summation system: Combines the flow of both hydraulic pumps to ensure quick cycle times and high productivity.

Arm priority: Gives priority to the arm operation for faster cycle times in leveling and for increased bucket filling when digging.

Swing priority: Gives priority to swing functions for faster simultaneous operations.

Regeneration system: Prevents cavitation and provides flow to other movements during simultaneous operations for maximum productivity.

Power boost: All digging and lifting forces are increased.

Holding valves: Boom and arm holding valves prevent the digging equipment from creeping.

Main pump

Type	2 x variable displacement axial piston pumps			
Maximum flow	l/min	gpm	2 x 152	2 x 40

Pilot pump

Type	Gear pump			
Maximum flow	l/min	gpm	1 x 20	1 x 5

Relief valve setting

Implement	MPa	psi	34.3 / 36.3	4,980 / 5,260
Travel circuit	MPa	psi	34.3	4,980
Slew circuit	MPa	psi	26.5	3,840
Pilot circuit	MPa	psi	3.9	570

Hydraulic motors

Travel: Variable displacement axial piston motor with mechanical brake

Slew: Fixed displacement axial piston motor with mechanical brake

Hydraulic cylinders

Mono boom				2
Bore x Stroke	ø x mm	ø x in	115 x 1165	4.5 x 45.9
Arm				1
Bore x Stroke	ø x mm	ø x in	120 x 1345	4.7 x 53.0
Bucket				1
Bore x Stroke	ø x mm	ø x in	105 x 1000	4.1 x 39.4
Dozer blade				2
Bore x Stroke	ø x mm	ø x in	140 x 320	5.5 x 12.6

Cab

The operator's cab has easy access via a wide door opening. The cab is supported on hydraulic dampening mounts to reduce shock and vibration levels. These along with sound absorbing lining provide low noise levels. The cab has excellent all-round visibility. The front windshield can easily slide up into the ceiling, and the lower front glass can be removed and stored in the side door.

Integrated air-conditioning and heating system:

The pressurized and filtered cab air is supplied by an automatically-controlled fan. The air is distributed throughout the cab from 14 vents.

Ergonomic operator's seat: The adjustable seat and joystick console move independently to accommodate the operator. The seat has nine different adjustments plus a seat belt for the operator's comfort and safety.

Sound Level

Sound pressure level in cab according to ISO 6396

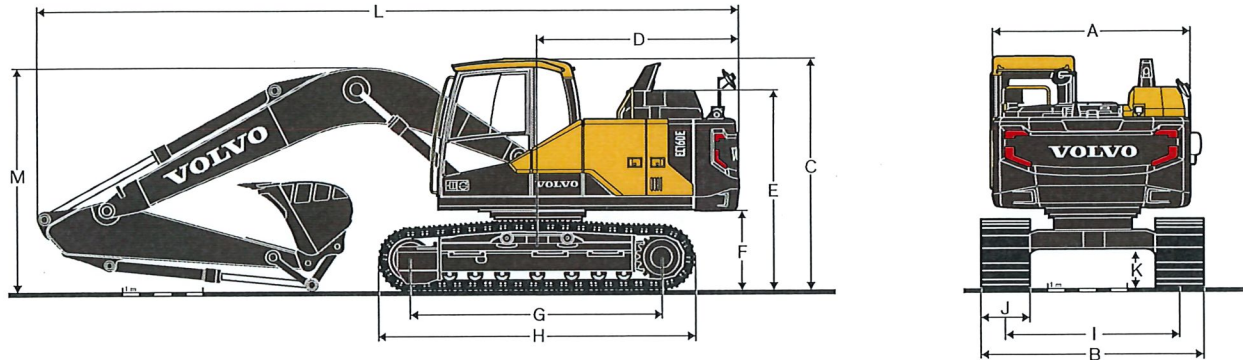
L _{PA} (standard)	dB	69
L _{PA} (tropical)	dB	70

External sound level according to ISO 6395 and EU Noise Directive 2000/14/EC

L _{WA} (standard)	dB	101
L _{WA} (tropical)	dB	102

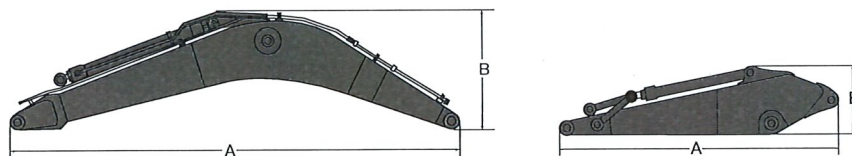
Specifications.

DIMENSIONS



Description			Unit						EC160EL			
Mono boom			m, ft in						5.2, 17'1"			
Arm			m	ft in	2.3	7'7"	2.6	8'6"	3.0	9'10"		
A	Overall width of upper structure		mm	ft in	2 490	8'2"	2 490	8'2"	2 490	8'2"		
B	Overall width		mm	ft in	2 590	8'6"	2 590	8'6"	2 590	8'6"		
C	Overall height of cab		mm	ft in	2 900	9'6"	2 900	9'6"	2 900	9'6"		
D	Tail swing radius		mm	ft in	2 550	8'4"	2 550	8'4"	2 550	8'4"		
E	Overall height of engine hood		mm	ft in	2 510	8'3"	2 510	8'3"	2 510	8'3"		
F	Counterweight clearance *		mm	ft in	1 010	3'4"	1 010	3'4"	1 010	3'4"		
G	Tumbler length		mm	ft in	3 180	10'5"	3 180	10'5"	3 180	10'5"		
H	Track length		mm	ft in	3 980	13'1"	3 980	13'1"	3 980	13'1"		
I	Track gauge		mm	ft in	1 990	6'6"	1 990	6'6"	1 990	6'6"		
J	Shoe width		mm	ft in	600	2'0"	600	2'0"	600	2'0"		
K	Min. ground clearance *		mm	ft in	460	1'6"	460	1'6"	460	1'6"		
L	Overall length		mm	ft in	8 880	29'2"	8 770	28'9"	8 810	28'11"		
M	Overall height of boom		mm	ft in	2 980	9'9"	2 900	9'6"	3 020	9'11"		

* Without shoe grouser

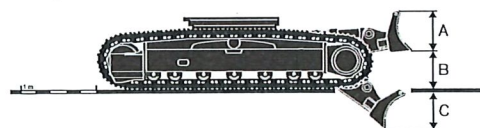


Description		Unit		mono		Description		Unit					
Boom		m	ft in	5.2	17'1"	Arm		m	ft in	2.3	7'7"	2.6	8'6"
A	Length	mm	ft in	5 400	17'9"	A	Length	mm	ft in	3 240	10'8"	3 500	11'6"
B	Height	mm	ft in	1 640	5'5"	B	Height	mm	ft in	855	2'10"	855	2'10"
	Width	mm	ft in	565	1'10"		Width	mm	ft in	395	1'4"	395	1'4"
	Weight	kg	lb	1 370	3,020		Weight	kg	lb	790	1,740	800	1,760

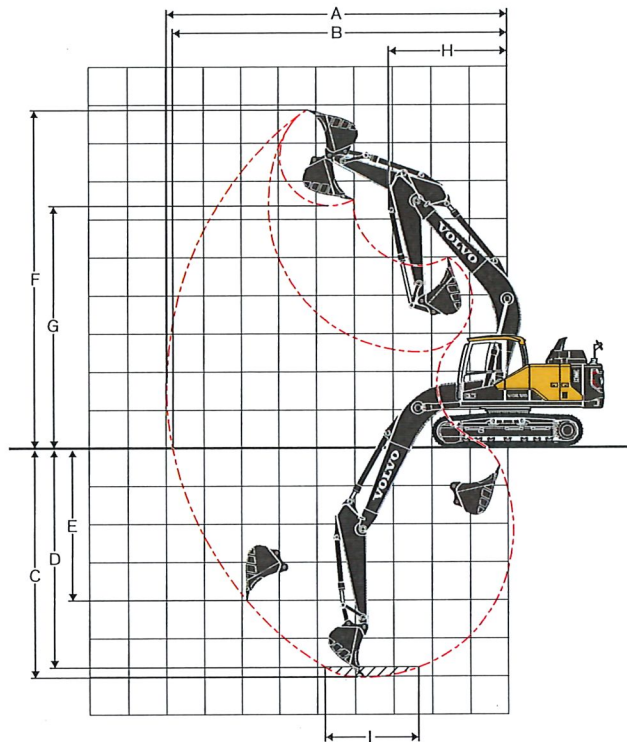
* Includes cylinder, piping and pin, excludes boom cylinder pin

* Includes cylinder, linkage and pin

Front dozer blade		Unit			
A	Height	mm	ft in	452	1'6"
	Width	mm	ft in	2 590	8'6"
	Weight	kg	lb	553	1,220
B	Lift height	mm	ft in	571	1'10"
C	Digging depth	mm	ft in	735	2'5"



WORKING RANGES



Description		Unit		EC160EL				
Boom		m, ft in		5.2, 17'1" mono				
Arm		m ft in		2.3	7'7"	2.6	8'6"	3.0
A	Max. digging reach	mm ft in	8 660	28'5"	8 980	29'6"	9 350	30'8"
B	Max. digging reach on ground	mm ft in	8 500	27'11"	8 820	28'11"	9 200	30'2"
C	Max. digging depth	mm ft in	5 770	18'11"	6 070	19'11"	6 470	21'3"
D	Max. digging depth (2.44 m / 8' level)	mm ft in	5 470	17'11"	5 810	19'1"	6 240	20'6"
E	Max. vertical wall digging depth	mm ft in	4 510	14'10"	4 990	16'4"	5 410	17'9"
F	Max. cutting height	mm ft in	8 560	28'1"	8 820	28'11"	9 030	29'8"
G	Max. dumping height	mm ft in	6 080	19'11"	6 310	20'8"	6 510	21'4"
H	Min. front swing radius	mm ft in	3 070	10'1"	3 070	10'1"	3 070	10'1"

DIGGING FORCES WITH DIRECT FIT BUCKET

Bucket radius			mm ft in	1 319	4'4"	1 319	4'4"	1 319	4'4"
Breakout force - bucket	Normal	SAE J1179	kN lbf	101.5	22,810	101.5	22,810	101.5	22,820
	Power boost	SAE J1179	kN lbf	107.3	24,110	107.3	24,120	107.3	24,130
	Normal	ISO 6015	kN lbf	115.3	25,910	115.3	25,920	115.3	25,930
	Power boost	ISO 6015	kN lbf	121.9	27,390	121.9	27,400	121.9	27,410
Tearout force - dipper arm	Normal	SAE J1179	kN lbf	90.0	20,230	80.0	17,980	72.5	16,290
	Power boost	SAE J1179	kN lbf	95.1	21,390	84.6	19,010	76.6	17,220
	Normal	ISO 6015	kN lbf	92.2	20,730	81.7	18,370	73.8	16,600
	Power boost	ISO 6015	kN lbf	97.5	21,910	86.4	19,420	78.1	17,550

Rotation angle, bucket ° 183 183 183

Specifications.

MACHINE WEIGHTS AND GROUND PRESSURE

EC160EL		5.2m / 17'1" boom, 2.6m / 8'6" arm, 550kg / 1,210lb - 0.7m³ / 0.93yd³ bucket, 3 200kg / 7,060lb counterweight						
Description	Shoe width		Operating weight		Ground pressure		Overall width	
	mm	in	kg	lb	kPa	psi	mm	in
Without dozer blade								
Triple grouser	500	20	17 670	38,970	50.0	7.3	2 490	8'2"
	600	24	17 900	39,470	42.2	6.1	2 590	8'6"
	700	28	18 140	39,990	36.3	5.3	2 690	8'10"
	800	32	18 535	40,870	32.4	4.7	2 790	9'2"
	900	36	18 800	41,450	29.4	4.3	2 990	9'10"
With dozer blade								
Triple grouser	500	20	18 850	41,560	53.0	7.7	2 490	8'2"
	600	24	19 080	42,070	45.1	6.5	2 590	8'6"
	700	28	19 310	42,590	39.2	5.7	2 690	8'10"
	800	32	19 710	43,460	35.3	5.1	2 790	9'2"
	900	36	19 980	44,050	31.4	4.6	2 990	9'10"

BUCKET SELECTION GUIDE

Bucket type		Capacity		Cutting width		Weight		Teeth	EC160EL			EC160EL with dozer blade		
									5.2m / 17'1" boom, 600mm / 24' shoe, 3 200kg / 7,060lb counterweight					
		m³	yd³	mm	ft	kg	lb	EA	2.3m / 7'7" arm	2.6m / 8'6" arm	3.0m / 9'10" arm	2.3m / 7'7" arm	2.6m / 8'6" arm	3.0m / 9'10" arm
Direct fit Buckets	General purpose	0.30	0.39	450	17.72	390	861	3	C	C	C	C	C	C
		0.36	0.47	600	23.62	417	919	3	C	C	C	C	C	C
		0.46	0.60	750	29.53	450	992	3	C	C	C	C	C	C
		0.58	0.76	900	35.43	505	1,114	4	C	C	C	C	C	C
		0.70	0.92	1050	41.34	550	1,213	4	C	C	C	C	C	C
	Heavy duty	0.84	1.10	1200	47.24	618	1,362	5	C	C	C	C	C	C
		0.30	0.39	450	17.72	382	841	3	D	D	D	D	D	D
		0.36	0.47	600	23.62	409	903	3	D	D	D	D	D	D
		0.46	0.60	750	29.53	444	979	3	D	D	D	D	D	D
		0.58	0.76	900	35.43	511	1,126	4	D	D	D	D	D	D

Please consult with your Volvo dealer for the proper match of buckets and attachments to suit the application.

The recommendations are given as a guide only, based on typical operation conditions.

Bucket capacity based on ISO 7451, heaped material with a 1:1 angle of repose.

Maximum material density

	kg/m³	lb/yd³	
A	1 200 - 1 300	2,000 - 2,200	Coal, Caliche, Shale
B	1 400 - 1 600	2,300 - 2,700	Wet earth and clay, Limestone, Sandstone
C	1 700 - 1 800	2,800 - 3,100	Granite, Wet sand, Well blasted rock
D	> 1 900	> 3,200	Wet mud, Iron ore

LIFTING CAPACITY EC160EL

Lifting capacity at the arm end without bucket.
For lifting capacity including bucket, simply subtract actual weight of the direct fit bucket or the bucket with quick coupler from the following values.

	Lifting hook related to ground level	1.5m, 5 ft		3.0m, 10 ft		4.5m, 15 ft		6.0m, 20 ft		7.5m, 25 ft		Max. Reach	
		Along UC	Across UC	Along UC	Across UC	Along UC	Across UC	Along UC	Across UC	Along UC	Across UC	Along UC	Across UC
Boom : 5.2 / 17'1" Arm : 2.3m / 7'7" Shoe : 600mm / 24' CWT : 3 200kg / 7,060lb	6.0 m kg											*4 480	3 650 5.9m
	20 ft lb											*9,860	8,220 19.0 ft
	4.5 m kg					*4 970	*4 970	*4 660	3 480			4 490	2 880 6.8m
	15 ft lb					*10,770	*10,770	*10,230	7,500			9,990	6,400 22.1 ft
	3.0 m kg					*6 580	5 050	5 290	3 340			3 990	2 530 7.2 m
	10 ft lb					*14,180	10,920	11,400	7,220			8,810	5,610 23.6 ft
	1.5 m kg					7 920	4 730	5 130	3 200			3 820	2 410 7.3 m
	5 ft lb					17,060	10,230	11,050	6,910			8,420	5,310 24.1 ft
	0 m kg					7 720	4 560	5 010	3 100			3 920	2 450 7.1m
	0 ft lb					16,610	9,850	10,800	6,690			8,640	5,410 23.4 ft
	-1.5 m kg			*10 820	8 360	7 670	4 520	4 970	3 060			4 360	2 710 6.6m
	-5 ft lb		*24,720	17,960	16,500	9,750	10,730	6,620				9,650	6,000 21.6 ft
	-3.0 m kg			*13 000	8 500	7 750	4 590					5 590	3 430 5.6m
	-10 ft lb		*28,150	18,280	16,670	9,900						12,470	7,650 18.2 ft
Boom : 5.2 / 17'1" Arm : 2.6m / 8'6" Shoe : 600mm / 24' CWT : 3 200kg / 7,060lb	7.5 m kg											*4 110	*4 110 4.8m
	25 ft lb											*9,050	*9,050 15.4 ft
	6.0 m kg							*4 150	3 570			*3 760	3 320 6.3m
	20 ft lb							*9,030	7,680			*8,320	7,460 20.3 ft
	4.5 m kg					*4 570	*4 570	*4 390	3 510			*3 680	2 680 7.1m
	15 ft lb					*9,930	*9,930	*9,630	7,570			*8,130	5,960 23.2 ft
	3.0 m kg			*9 730	9 330	*6 190	5 120	*5 090	3 370	3 770	2 400	3 750	2 380 7.5m
	10 ft lb			*20,590	20,160	*13,350	11,060	*11,080	7,280			8,280	5,280 24.7 ft
	1.5 m kg					*7 930	4 780	5 150	3 220	3 700	2 340	3 600	2 270 7.7 m
	5 ft lb					*17,130	10,320	11,090	6,940	7,980	5,040	7,930	5,010 25.1 ft
	0 m kg			*5 620	*5 620	7 740	4 570	5 020	3 100			3 680	2 300 7.5m
	0 ft lb			*13,000	*13,000	16,640	9,870	10,820	6,690			8,110	5,090 24.5 ft
	-1.5 m kg	*5 790	*5 790	*9 910	8 310	7 660	4 510	4 960	3 050			4 050	2 520 6.9m
	-5 ft lb	*12,980	*12,980	*22,600	17,860	16,470	9,730	10,700	6,590			8,950	5,580 22.7 ft
	-3.0 m kg	*10 330	*10 330	*13 460	8 440	7 710	4 550					5 020	3 100 6.0m
	-10 ft lb	*23,240	*23,240	*29,140	18,140	16,590	9,830					11,180	6,900 19.5 ft
	-4.5 m kg			*10 810	8 720							*7 450	4 980 4.4m
	-15 ft lb			*23,080	18,790							*16,540	11,410 13.9 ft
Boom : 5.2 / 17'1" Arm : 3.0m / 9'10" Shoe : 600mm / 24' CWT : 3 200kg / 7,060lb	7.5 m kg											*3 470	*3 470 5.4m
	25 ft lb											*7,760	*7,760 17.3 ft
	6.0 m kg							*3 660	3 610			*3 170	2 980 6.7m
	20 ft lb							*8,160	7,750			*7,010	6,680 21.8 ft
	4.5 m kg							*3 990	3 530			*3 110	2 450 7.5m
	15 ft lb							*8,740	7,600			*6,850	5,450 24.5 ft
	3.0 m kg			*8 200	*8 200	*5 610	5 160	*4 720	3 370	3 770	2 390	*3 200	2 190 7.9m
	10 ft lb			*17,400	*17,400	*12,100	11,150	*10,290	7,280	8,110	5,150	*7,050	4,850 25.9 ft
	1.5 m kg			*5 660	*5 660	*7 430	4 790	5 140	3 200	3 680	2 310	3 330	2 090 8.0m
	5 ft lb			*13,630	*13,630	*16,040	10,350	11,070	6,910	7,940	4,990	7,340	4,610 26.3 ft
	0 m kg			*6 130	*6 130	7 720	4 550	4 990	3 070	3 610	2 250	3 390	2 110 7.8m
	0 ft lb			*14,100	*14,100	16,590	9,810	10,750	6,620	7,790	4,850	7,480	4,660 25.7 ft
	-1.5 m kg	*5 290	*5 290	*9 280	8 190	7 600	4 450	4 910	3 000			3 690	2 290 7.3m
	-5 ft lb	*11,850	*11,850	*21,140	17,600	16,330	9,590	10,580	6,470			8,160	5,060 24.1 ft
	-3.0 m kg	*8 980	*8 980	*13 880	8 290	7 620	4 460	4 920	3 010			4 440	2 740 6.5m
	-10 ft lb	*20,200	*20,200	*30,040	17,810	16,380	9,630	10,630	6,510			9,870	6,090 21.1 ft
	-4.5 m kg			*11 770	8 530	7 790	4 610					6 650	4 010 5.0m
	-15 ft lb			*25,240	18,360	16,780	9,970					15,120	9,100 16.0 ft

Notes: 1. Machine in "Fine Mode-F" (Power Boost) for lifting capacities. 2. The above loads are in compliance with SAE J1097 and ISO 10567 Hydraulic Excavator Lifting Capacity Standards. 3. Rated loads do not exceed 87% of hydraulic lifting capacity or 75% of tipping load. 4. Rated loads marked with an asterisk (*) are limited by hydraulic capacity rather than tipping load.

Equipment.

STANDARD EQUIPMENT

Engine

Turbocharged, 4 stroke diesel engine with water cooling, direct injection and charged air cooler that meets Tier 4f requirements
Air filter with indicator
Air intake heater
Cyclone pre-cleaner
Electric engine shut-off
Fuel filter and water separator
Tropical cooling system
Alternator, 80 A

Electric/Electronic control system

* Contronics
Advanced mode control system
Self-diagnostic system
Machine status indication
Satellite Caretrack and Caretrack subscription
Engine speed sensing power control
Automatic idling system
One-touch power boost
Safety stop/start function
Adjustable LCD color monitor
Master electrical disconnect switch
Engine restart prevention circuit
Travel alarm
High-capacity halogen lights:
Frame-mounted: 2, Boom-mounted: 1
Batteries, 2 x 12 V / 100 Ah
Start motor, 24 V / 5.5 kW

Hydraulic system

Boom float function without HRV
Automatic sensing hydraulic system
Summation system
Boom priority
Arm priority
Swing priority
ECO mode fuel saving technology
Boom, arm and bucket regeneration valves
Swing anti-rebound valves
Boom and arm holding valves
Multi-stage filtering system
Boom cylinders (x2)
Cylinder cushioning
Cylinder contamination seals
Auxiliary hydraulic valve
Automatic two-speed travel motors
Pilot control pattern change
Hydraulic oil, longlife oil 46

Frame

Access way with handrail
Tool storage area
Punched metal anti-slip plates
Under cover (heavy duty)
3 200kg, 7,060lb counterweight

Cab and interior

ROPS (ISO12117-2) certified cab with openable roof hatch
Silicon oil and rubber mounts with spring
Control lock out lever
Travel pedals and hand levers
Straight travel pedal
Adjustable operator seat with heater and joystick control console
Control joysticks with 4 switches each
Heater & air-conditioner, automatic
Flexible antenna
Radio with AUX, USB Jack and Bluetooth
Cab, all-weather sound suppressed, includes:
Cup holders
Door locks
Tinted glass
Floor mat
Horn
Large storage area
* Pull-up type front window
* Removable lower windshield
Seat belt
Safety glass
* Sun screens, front, roof, rear
* Windshield wiper with intermittent feature
Rear view camera
Master key

Undercarriage

Under cover (heavy duty)
Hydraulic track adjusters
Greased and sealed track link
Track Guard

Digging equipment

5.2 m / 17'1" mono boom
2.6 m / 8'6" arm
Linkage
Manual centralized lubrication

OPTIONAL EQUIPMENT

Engine

Block heater: 120 V
Diesel coolant heater, 5 kW
Water separator with heater
Auto engine shutdown
Standard cooling system
Fuel filler pump: 35 l/min / 9 gpm

Electric

High-capacity LED lights:
Frame-mounted: 2, Boom-mounted: 1
* Extra work lights (Halogen or LED):
Boom-mounted 1
Cab-mounted 3
Counterweight-mounted 1
Anti-theft system
Rotating warning beacon

OPTIONAL EQUIPMENT

Hydraulic system

Boom hose rupture valve with overload warning device
Arm hose rupture valve
Boom float function with HRV
Hydraulic piping:
Work tool management system (up to 20 programmable memories)
Breaker & shear, 1 or 2 pump flow
Slope & rotator (40lpm, 11 gpm or 60lpm, 16 gpm)
Extra for slope & rotator
Grapple
Oil leak (drain) line
Quick coupler
Additional return filter
Breaker & shear pressure pre-setting
Volvo hydraulic quick coupler S1, S6
Volvo hydraulic quick coupler VQC-HU, DR16
Volvo hydraulic quick coupler RQC-HD, Steelwrist S60
Volvo hydraulic quick coupler RQC-HD, Steelwrist S70
Hydraulic oil, biodegradable 46
Hydraulic oil, longlife oil 32, 68

Cab and interior

ROPS (ISO12117-2) certified cab with fixed hatch
Fabric seat without heater
Fabric seat with heater and air suspension
Control joysticks with semi-long
Control joysticks with 3 switch & 1 proportional
Cab-mounted falling object guard (FOG)
Cab-mounted falling object protective structure (FOPS)
Anti-vandalism kit
Safety net for front window
Side view camera
Smoker kit (ashtray and lighter)
Sunlight protection, roof (steel)
Lower wiper with intermittent control
Rain shield
Specific key

Undercarriage

Dozer blade
500mm, 20'/600mm, 24'/700mm, 28'/800mm, 32'/900mm, 36' shoe with triple grousers

Digging equipment

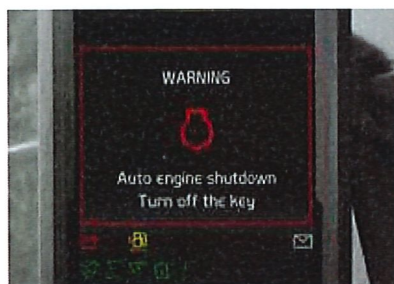
2.3 m / 7'7" , 3.0 m / 9'10" arm
Linkage with lifting eye

Service

Tool kit, daily maintenance
Tool kit, full scale

Selection of Volvo optional equipment

Auto engine shutdown



Two-piece boom



Diesel coolant heater



LED lights



Fuel filler pump



Falling Objects Guard (FOG)



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

Volvo Construction Equipment

volvoce.com

VOLVO

Volvo Construction Equipment North America Warranty – Disclaimers – Limitations Limited Warranty

Volvo Construction Equipment North America ("Volvo CE") hereby extends to its authorized dealers ("Dealer") and the Dealer's end-use customers ("Customer", and both Dealer and Customer are referred to herein as a "Buyer"), who purchase a new Volvo construction equipment machine ("Machine") or new Volvo part ("Part", both of which are referred to herein as a "Product") from Volvo the following limited warranty:

Subject to the exceptions and limitations set forth below, Volvo CE or Dealer will repair or replace any part of a new Machine or new Part which proves to be defective in material or workmanship during the following periods (the "Warranty Period"):

- Volvo wheel loaders: 12 months/2500 hours, whichever first occurs
- Volvo articulated haulers: 12 months/2500 hours, whichever first occurs
- Volvo hydraulic excavators: 12 months/2500 hours, whichever first occurs
- Volvo motor graders: 12 months/2500 hours, whichever first occurs
- Volvo compactors: 12 months/2500 hours, whichever first occurs
24 month unlimited hours on DD90 and larger compactors
- Volvo pavers: 12 months/2500 hours, whichever first occurs
24 month unlimited hours on 6000 / 7000 series pavers
- Volvo milling: 12 months/2500 hours, whichever first occurs
- Volvo compact wheel loaders (up to 100 net hp.): 12 months/unlimited hours
- Volvo skid steer loaders: 12 months/unlimited hours; Lifetime arm for one-sided
- Volvo compact hydraulic excavators (less than 11 metric tons): 12 months/unlimited hours
- Volvo backhoe loaders: 12 months/unlimited hours
- Volvo engines: 12 months/2500 hours, whichever first occurs
- Volvo parts: 6 months/1500 hours, whichever first occurs
- Volvo remanufactured components: 12 months/2500 hours, whichever first occurs
- Volvo Attachments: 12 months

The Warranty Period commences immediately following the delivery of said Product to the Buyer who first puts said Product into use. The foregoing limited warranty shall include the labor cost to accomplish the repair or replacement of the defective part provided that the repair or replacement was performed by a Dealer.

The foregoing warranty does not cover: (i) any Product found to have been damaged by abuse, accident, other casualty or a failure to maintain or use the warranted Product in accordance with the applicable manuals or instructions (Buyer is required to use only original equipment manufacturer filters during the Warranty Period); (ii) the labor costs to repair or replace defective Parts after the expiration of the Warranty Period of the Machine in which such Part is located; (iii) overtime labor premiums; (iv) costs and expenses associated with the transportation of Dealer's service personnel to and from the location of the warranted Product; (v) any parts, components, attachments or accessories for which Buyer receives a separate warranty by the manufacturer or producer thereof (in specified cases said warranty may be administered by Volvo CE); (vi) maintenance items or ground engaging parts that have achieved their normal service life.

DISCLAIMER OF IMPLIED WARRANTIES AND LIMITATION OF REMEDIES

THE FOREGOING WARRANTY TO BUYER IS EXCLUSIVE AND IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED, AND THERE IS NO IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

REMEDIES AVAILABLE TO BUYER ARE LIMITED TO MAKING A CLAIM UNDER THE FOREGOING WARRANTY AND ARE EXCLUSIVE AND EXPRESSLY LIMITED TO OBTAINING THE PARTS AND LABOR IN ACCORDANCE WITH THE TERMS OF SAID WARRANTY.

Warranty – Disclaimers – Limitations

LIMITATIONS OF LIABILITY AND DAMAGES

Regardless of whether a claim against Volvo CE or Dealer is based on the foregoing warranty or is an action in contract, tort (negligence or strict liability) or otherwise, their respective liability for losses, damages or expenses of any kind arising from the design, manufacture, repair or sale of the Products is limited, unless otherwise prohibited by law, to an amount not exceeding the cost performing the obligations contained in the foregoing warranty, and in no event shall their respective or joint liability exceed the value of the Product or part thereof giving rise to such liability.

CONSEQUENTIAL AND SIMILAR DAMAGES NOT RECOVERABLE

Except for performing the obligations of the foregoing warranty in accordance with its terms, Volvo CE and Dealer shall have no liability for loss, damage, or expense, directly or indirectly, attributable to a loss of use of a Product, loss or damage to property other than the Product, loss or damage to the Product or any part thereof or any other economic or commercial loss, including, without limitation, lost profits or special or consequential damages (except liability for any type of consequential damages which by law may not be disclaimed). The parties intend that this prohibition against consequential and similar damages will survive and be effective even if the limitation of remedies in the foregoing sections is found to fail of its essential purpose under section 2-719 of the Uniform Commercial Code.

ALLOCATION OF RISK

The foregoing warranty disclaimers, limitations of liability and limitation of remedies are bargained allocations of risks among (i) the Customer who purchased the Product; (ii) the Dealer who sold the Product, and (iii) Volvo CE, which is a third party beneficiary of the contract of sale between the Customer and the Dealer. The Buyer of the Product accepts the foregoing warranty and the other bargained for allocations of risk as part of the agreed price for the purchase of the Product to which the foregoing warranty applies. Volvo CE is prepared to offer different warranties and other allocations of risk for other prices. However, any such change in the warranty or the allocation of risks must be confirmed in writing by Volvo CE.

STATUTE OF LIMITATIONS

Any action by a Buyer of a Product for breach of contract, for breach of warranty arising under, or for a cause of action arising out of the sale of a Product, whether based on contract, tort (negligence or strict liability) or otherwise, shall be commenced within one (1) year after the cause of action has accrued. Any such cause of action shall be deemed to have accrued at the earlier of (i) the discovery of the defect or breach, or (ii) the expiration of the applicable Warranty Period.