

VOLVO EXCAVATORS



VOLVO

The new B-series excavators. In performance, comfort and economy, they dig deeper.

To create a class-leading excavator, we started with you. Your opinions and suggestions were designed into these machines. The result is a luxurious cab, a highly reliable engine that is matched to the hydraulics for maximum fuel economy, enhanced hydraulics to improve ease of operation, a focus on serviceability to make your life easier.



The Volvo B-series— innovation at every turn

When we designed the B-series, we examined every component of our excavators to determine how to maximize comfort, reliability, productivity and serviceability. We focused on a few key areas to make it happen. The results? A new Volvo-designed engine that is reliable and performance-driven, built to perfectly match hydraulic output

levels for maximum productivity. A hydraulic system that is both tough and intelligent, designed to respond to the slightest operator command. A cabin with a full range of operator conveniences and comforts to help the work day go smoothly. And features throughout the machine that have been designed to simplify routine maintenance for more uptime to get the job done.

It's all in the details

Look ahead to see the wide variety of innovations we've added to the Volvo B-series Excavators, then contact your local Volvo dealer for the details. Remember that every Volvo excavator is backed by complete customer support from the Volvo worldwide network of dealers and their sales, service and parts organizations.

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- All-new turbocharged Volvo engine with charged air cooler, built specifically for use in Volvo excavators, easily meets low-emission EPA Tier 2 standards.
 - Operator-designed cab with industry-leading visibility, improved ergonomic seat, more efficient heating and cooling, and more storage space.
 - Booms and arms built to withstand extreme stress and provide long, reliable life.
 - Integrated electronic system (Contronics with advanced mode control system) for more efficient balance of available engine power and hydraulic output.
 - State-of-the-art hydraulics are highly responsive for timely work cycles and high efficiency.
 - Powerful breakout and lifting forces.
 - Long and stable undercarriage is built tougher than ever.



A cab for every work environment



Every operator works under different conditions. Differing conditions demand different cab features. Features like electronic climate control, top-notch windshield wiping, and even extra cabin room. B-series cabs have the versatility to make your job comfortable and convenient throughout the work day.

Comfortable inside, no matter how tough the job outside

Through wind, snow, sun or rain, the Volvo easy-access cab has a list of features to help you maintain productivity more comfortably. First and foremost is the machine's industry-leading visibility, which minimizes operator fatigue and

maximizes productivity and safety. The improved visibility is a result of expanded window area, a larger window wiping area with parallel-working wipers, an optional lower wiper, and no interfering cross bar.

The roomy cab has plenty of storage space for personal items and features an ergonomically-correct environment. The operator's seat is adjustable and includes control consoles that move independently to meet any operator's shape and size. In addition, the B-series includes electronic climate control with cooling capacity to 25,790 BTU (6500 Kcal/h), and heating capacity to 28,570 BTU (7200 Kcal/h). Noise and shock are kept to a minimum with shock-reducing mounts and sound-absorbing material. Additional rearview mirrors with a large viewing area promote safer, more controlled machine operation.

Cab comfort

- Ergonomic cab provides greater operator comfort for higher operator efficiency and productivity.
- Instrument panel redesigned to enable even faster operating status checks and greater work efficiencies.
- Increased cooling and heating capacity, with a four-speed fan and thirteen vents.
- Gas-spring windows with easily removable panes.
- Flat, spacious cab floor makes it easy to clean.
- High-quality, comfortable seat with nine different adjustments.
- Optional FOPS (Falling Object Protective Structures) and optional cab-mounted FOG (Falling Object Guard).



It's all Volvo

If a machine isn't reliable, productivity will suffer. That is why Volvo has made reliability a priority, building a strong foundation of proven systems and components designed to keep the B-series up and running. At the core of B-series' reliability is the new Volvo engine.

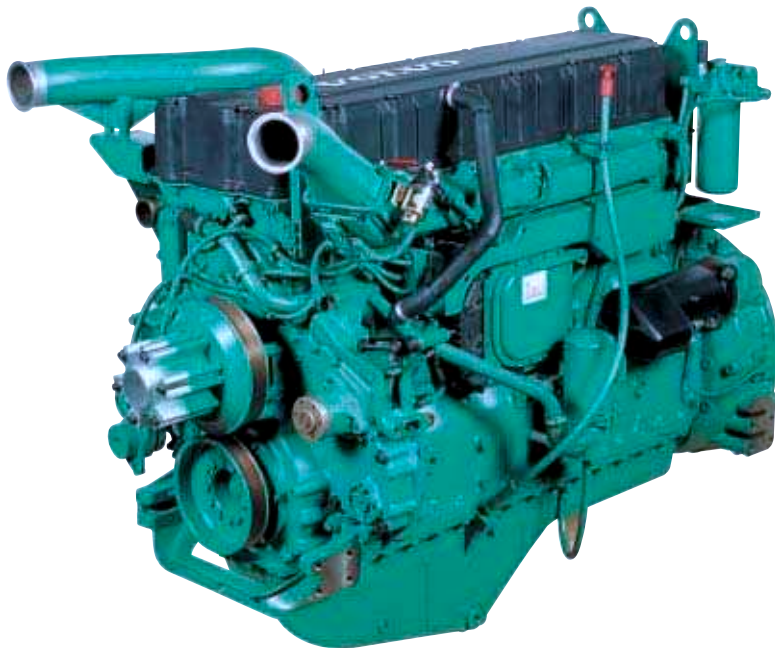
Command performance

The new Volvo engine is one of the most exciting additions to Volvo's B-series line of excavators. This turbocharged 6-cylinder (EC140B: 4-cylinder) diesel engine with direct injection and charged air cooler is built to respond to the unique demands of excavation. Among the highest horsepower in its class, the engine is well matched to the hydraulic system's components and design. Combined, the powerful new Volvo engine and high-performance hydraulics provide exceptionally high fuel efficiencies, especially during hard trenching or mass excavation.

A number of features keep the engine running smoothly and reliably. A new charged air cooler works with the engine's turbocharger for more efficient combustion and low emissions. Three-stage air cleaning prolongs the engine's life and increases uptime by effectively filtering out particles before they reach the engine. An optional oil bath pre-cleaner also provides excellent particle filtration and easier maintenance.

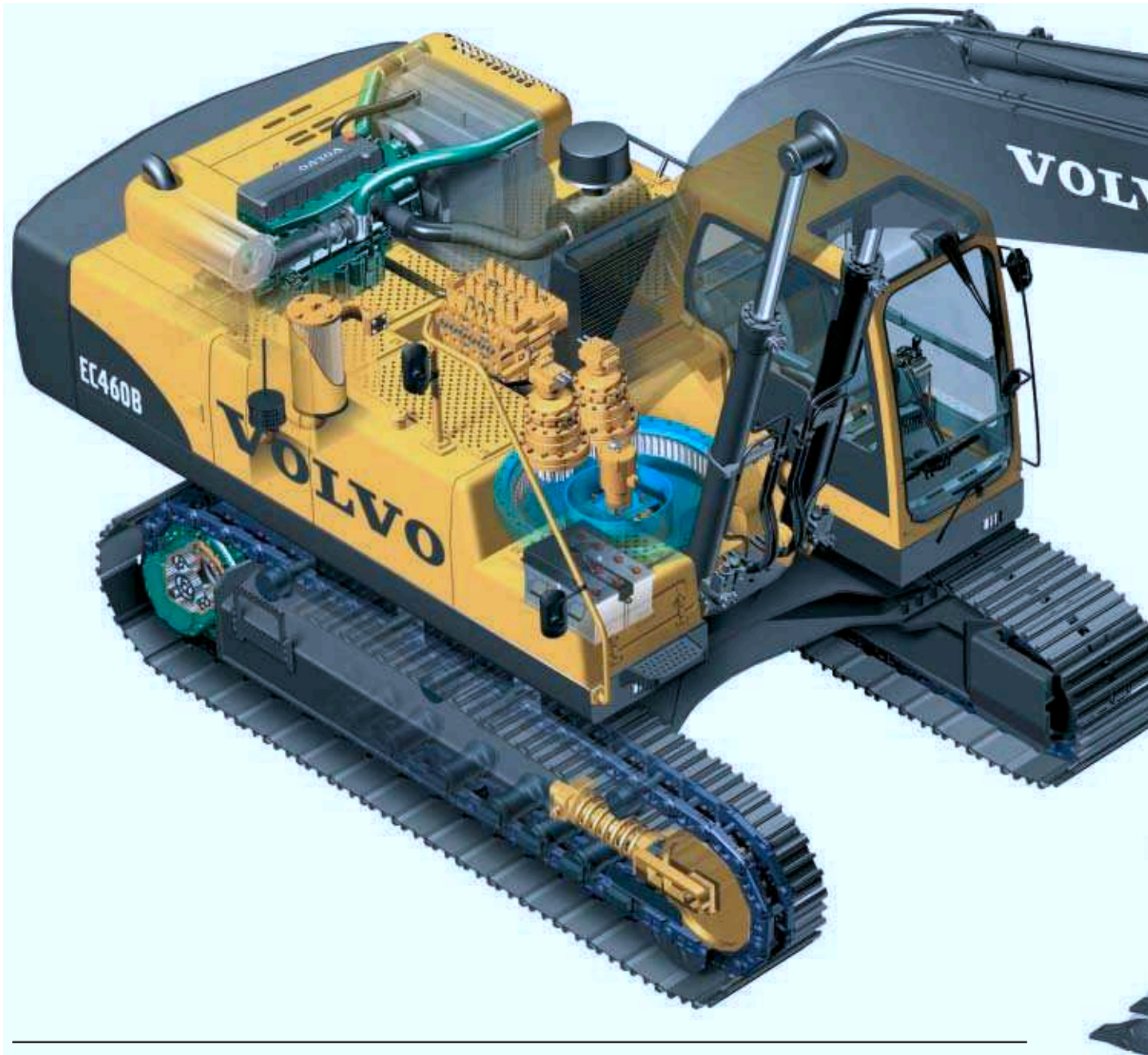
Engine

- All new low-emission Volvo engine with charged air cooler (Except EC140B) precisely matched to hydraulic system components and design for more power and control than ever.
- Three-stage air cleaning for longer engine life and lower operating costs.
- Auto idling system reduces noise and fuel consumption.
- Optional oil bath pre-cleaner for additional particle filtration.





Advanced technology



Hydraulics

- Advanced work mode control system is activated according to joystick control lever movements for ease of operation and excellent controllability. Machine automatically optimizes the working mode.
- Boom and arm flow regeneration ensures efficient operation and fuel economy.
- Advanced-engineered hydraulic oil cooler built of aluminum to maximize heat dissipation and minimize corrosiveness.
- One-touch power boost for surge increase in breakout forces.

Electrical system

- The Contronics system balances available engine power with hydraulic output for maximum productivity and minimum fuel consumption.
- Self-diagnostic system has error codes and status indicators to ease troubleshooting.
- Powerful 80 A alternator provides greater capacity for machines that work in 24-hour shifts (EC140B/EC210B).
- High-capacity halogen lights – two or four boom lights, and two lights on forward superstructure – provide good visibility under low-light conditions.

Superstructure and digging equipment

- Digging equipment designed and tested for tough conditions for proven durability and reliability.
- Excellent digging and lifting capacities.
- Fuel tank capacity equals two full work shifts.
- Reinforced idler motor frame track motor protection cover and optional skid rail.



A state-of-the-art hydraulic system performs as a direct extension of the operator's thoughts and movements. That's why the B-series hydraulic system is designed with operator controllability and precision as its focus. With four different power modes, B-series hydraulics respond automatically to the operator's joystick movements and pilot pressure. This allows Volvo machines to achieve maximum efficiency on a full range of jobsites.

The Volvo hydraulic system is as tough as it is intelligent. Boom, arm and swing priority system, boom and arm flow regeneration, and two variable axial displacement piston pumps enhance hydraulic performance resulting in high swing torque, powerful breakout forces and fast bucket-in and swing speeds in all B-series models. That means faster cycle times and more efficient operation across the board. In addition, the B-series includes an advanced-engineered hydraulic oil cooler. Built of aluminum for maximum heat dissipation and anti-corrosive properties, the new oil cooler minimizes heat build-up, allowing the system to operate at full potential.

And when the job requires a change of bucket or tools, Volvo's hydraulic quick coupler makes it relatively easy, promoting the flexibility and versatility modern jobsites demand.

An evolved electrical system

With this new generation of excavators comes a new generation electrical system – Contronics. The new Volvo excavators are equipped with a technologically-advanced electronic system. It consists of an on-board computer (V-ECU), Machine Display Unit (MDU) and an Engine Electronic Control Unit (E-ECU). They are all connected through a data link. All machine information is stored in the V-ECU. Information necessary for service can be shown on the external service display. All machine information can be downloaded to a PC using the MATRIS program. This data is an effective resource for diagnostics and service work. The MDU monitors and provides information on all vital machine functions. The information is shown on the display screen located on the right console.

The Contronics balance available engine power with hydraulic output for maximum performance.

At your service

A low-maintenance machine is a valuable investment. It means more up-time, greater productivity, and fewer hassles on the jobsite. That is why the B-series incorporates features to make service and routine maintenance as quick and easy as possible.



Low-maintenance design

All areas of the machine have enhanced features to make serviceability easier. These features include a new long-life hydraulic filter; improved air filter efficiency and serviceability; a quick and common oil drain with valve; high filter capacities for longer service intervals; and a hinged-type undercover for easy access to the engine oil filter.

In addition, many of our service parts have been reorganized within the

excavator to provide easier service access than ever. The result? Filters that are more easily replaced, centralized lubrication points, a more convenient electric relay box location, and large, easy-to-open doors and hoods with locks.

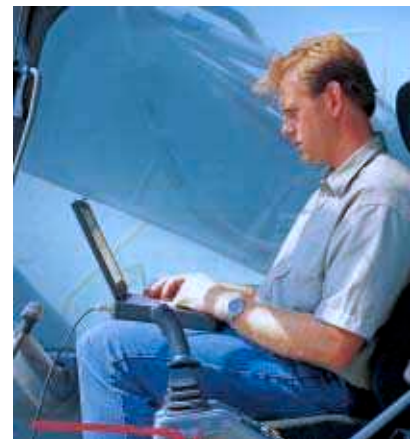
But our easy maintenance features don't stop there. Volvo excavators have always had a three-stage air cleaning system to keep dust and dirt out of the intake system. Now it's also available with a high-performance oil bath pre-cleaner for highly effective particle filtration. Volvo also provides service technician and machine owners with three advanced diagnostic tools designed for assisting with routine maintenance and troubleshooting.

Taking our responsibility seriously

One of Volvo's core values is safety. That's why we also incorporate extra measures to protect our operators, their surroundings, and the environment from harm.

The safety and environmental features on our new B-series excavators meet or exceed ISO 14001 regulatory

requirements, including EPA Tier 2 emissions standards. The total machine is recyclable up to 97%. In addition, our machines have a number of safety features to keep the jobsite secure. We've designed our superstructure walkway with anti-slip punched-metal and convenient steps and handrails. We've included a hydraulic pressure relief system for safer changing of attachments and safer emergency shutdowns. And we've always incorporated high capacity halogen lights to ensure good visibility under low-light conditions.







Serviceability





- Large, easy-to-open doors and hoods with locks.
- Long-life hydraulic filter.
- High air filter efficiency and serviceability.





- Checkpoints for hydraulic pressure measurements grouped together for easy access.
- New, hinged-type undercover for easy access to the engine oil filter.

Environment & safety

- Low-emission engines meeting EPA Tier 2 emission standards.
- Electrical master switch.
- Optional front window safety screens, FOPS (Falling Object Protection Structure) and FOG (Falling Object Guard).

									
Engine		Volvo EC140B		Volvo EC160B		Volvo EC210B*		Volvo EC240B	
Rated output, at	r/s, r/min	Volvo D4D EAE1		Volvo D6D EBE2		Volvo D6D EAE2		Volvo D7D EBE2	
ISO 9249/DIN 6271, net	kW, hp	35	1,900	32	1,900	32	1,900	33	2,000
Bucket capacity	m ³ , yd ³	69	93	81	109	107	143	125	168
Lifting capacity		0.60-0.98 0.78-1.28		0.78-1.18 1.01-1.54		0.83-1.55 1.08-2.03		1.05-1.98 1.37-2.58	
along undercarriage	t, lb	3.3	7,170	5.0	10,800	7.1	15,430	9.1	19,760
at reach/height	m, ft	6.0/1.5	20'/5'	6.0/1.5	20'/5'	6.0/1.5	20'/5'	6.0/1.5	20'/5'
Breakout force, SAE	kN, lb	87.3	19,620	105.2	23,660	130.4	29,330	156.9	35,280
Max. digging reach	m, ft-in	8.3	27' 4"	9.0	29' 5"	9.9	32' 7"	10.3	33' 8"
Max. digging depth	m, ft-in	5.5	18' 2"	6.0	19' 10"	6.7	22' 1"	7.0	22' 11"
Operating weight	t, lb	13.4-15.2	29,529-33,450	16.5-19.2	36,340-42,340	20.8-22.3	45,950-49,260	24.9-25.8	53,360-56,820

									
Engine		Volvo EC290B		Volvo EC330B		Volvo EC360B		Volvo EC460B	
Rated output, at	r/s, r/min	Volvo D7D EAE2		Volvo D10D EAE2		Volvo D10B EAE2		Volvo D12C EAE2	
ISO 9249/DIN 6271, net	kW, hp	32	1,900	28	1,700	28	1,700	32	1,900
Bucket capacity	m ³ , yd ³	143	192	184	247	184	247	228	306
Lifting capacity		1.03-2.1 1.34-2.75		1.25-2.5 1.64-3.27		1.6-3.0 2.09-3.92		1.73-3.78 2.26-4.94	
along undercarriage	t, lb	10.8	23,440	10.0	21,630	11.6	24,980	13.8	29,820
at reach/height	m, ft	6.0/1.5	20'/5'	7.5/1.5	25'/5'	7.5/1.5	25'/5'	7.5/1.5	25'/5'
Breakout force, SAE	kN, lb	172.6	38,810	209	47,190	209	47,190	244.2	54,900
Max. digging reach	m, ft-in	10.7	35' 1"	11.1	36' 3"	11.2	36' 8"	12.0	39' 4"
Max. digging depth	m, ft-in	7.3	24' 0"	7.4	24' 2"	7.5	24' 7"	7.7	25' 3"
Operating weight	t, lb	28.2-29.9	62,180-65,930	32.4-34.7	71,440-76,560	36.5-38.4	80,480-84,580	44.3-47.9	97,570-105,580

									
Engine		Volvo EW180B		Volvo EC210B LR		Volvo EC240B LR		Volvo EC290B LR	
Rated output, at	r/s, r/min	Volvo D6D EAE2		Volvo D6D EAE2		Volvo D7D EBE2		Volvo D7D EAE2	
ISO 9249/SAE 1349, net	kW, hp	31.7	1,900	32	1,900	33	2,000	32	1,900
Bucket capacity	m ³ , yd ³	112	150	107	143	125	168	143	192
Lifting capacity		0.42-1.1 0.55-1.44		0.52 0.68		0.52 0.68		0.5-0.57 0.68-0.75	
along undercarriage	t, lb	7.7	16,980	3.0	6,410	3.3	7,240	4.2	9,140
at reach/height	m, ft	6.0/1.5	19.7'/4.9'	10.5 / 1.5	35'/5'	10.5/1.5	35'/5'	10.5/1.5	35'/5'
Breakout force, SAE	kN, lb	111.2	25,020	68.6	15,430	68.6	15,430	69.1	15,550
Max. digging reach	m, ft-in	9.6	31' 6"	15.8	51' 10"	18.3	60' 1"	18.6	61' 0"
Max. digging depth	m, ft-in	6.3	20' 8"	12.1	39' 8"	14.4	47' 1"	14.8	48' 6"
Operating weight	t, lb	17.7-19.2	39,030-42,340	23.2	51,200	27.6	60,790	31.6	69,680

These specs are American standard and indicated LC machines only.
* NLC version available

See also:
- product brochures
- www.volvoce.com



Technology on Human Terms

The Volvo Construction Equipment is one of the world's leading manufacturers of construction machines, with a product range encompassing wheel loaders, excavators, articulated haulers, motor graders, and compact equipment.

The tasks they face vary considerably, but they all share one vital feature: technology that helps man perform better, safely, efficiently, and with care of the environment. We refer to it as Technology on Human Terms.

The sheer width of the product range means it is always possible to choose exactly the right machine and attachment for the job. Each machine also comes with the quality, continuity, and security which is represented by the

Volvo name. The security of the service and parts organization; the security of always having immediate access to leading-edge research and technical development are part of the Volvo name. A machine from Volvo meets the highest demands in all kinds of jobs, under all conditions, the world over.

Volvo Construction Equipment develops, manufactures, and markets construction equipment. We are a Volvo company with production facilities on four continents and a market presence in over 100 countries.

All products are not available in all markets. Under our policy of continuous improvement, we reserve the right to change specifications and designs without prior notice. The illustrations do not necessarily show the standard version of the machine.

VOLVO

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