

# VOLVO L220D

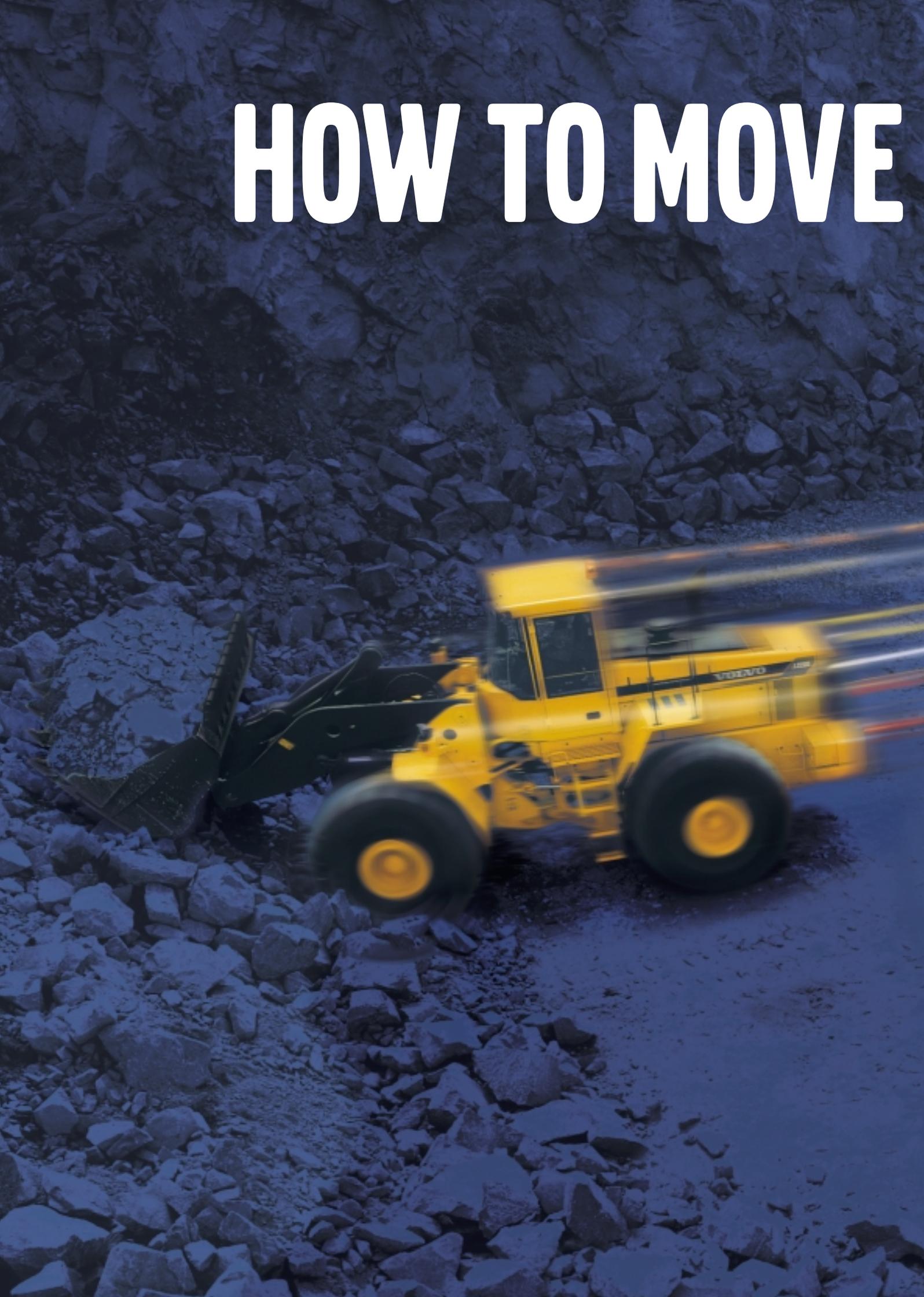
30 TONNES OF BUSINESS SENSE



**VOLVO**



# HOW TO MOVE



# MORE MATERIAL



# WITH LESS FUEL

The essence of productivity must surely be to move as much material as possible at the lowest possible cost. That's why we at Volvo Construction Equipment have always endeavoured to build the most cost-efficient construction machines on the market – an approach that has won the appreciation of customers worldwide.

## The New Volvo L220D

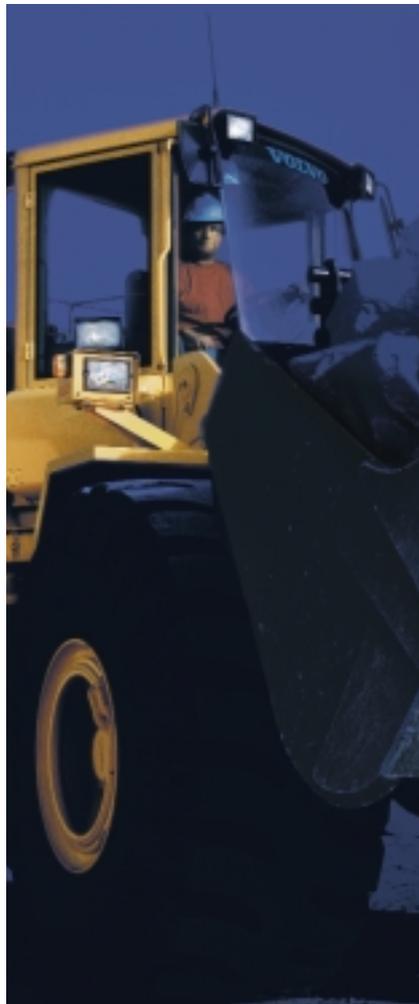
Volvo has once again put its innovation skills to work and come up with a solution that lowers fuel consumption while increasing overall performance. We've given that solution a name: Volvo L220D.

### 30 tonnes of speed and agility

What is the key to the superior productivity of this brand new 349 hp, 4,5–14 m<sup>3</sup> bucket, 30-tonne Volvo wheel loader? We could give you a shopping list of smart Volvo innovations, such as the new Care Cab II and Con-  
tronic II, but if we have to single out one it's the load-sensing hydraulic system. This feature alone ensures that the L220D gets just the right amount of hydraulic oil pumped around its system at all times, regardless of whether you're working in the rock face, in aggregate or with timber.

### A built-in sense of security

We're the first to admit that there's more to profitability than loader performance, however impressive. You need service. You need support. You need to know we are wherever you are. We've taken all this into consideration. Not only do our machines



offer built-in serviceability, all our markets are on constant alert too – with capacity to spare. A little known fact: we train 5,000 service technicians annually.

### When you sell your Volvo you'll be glad you bought it.

When the time comes to retire your L220D, your Volvo dealer will be happy to make you a competitive offer. How can we be so sure? Because he knows that all service and maintenance have been carried out by authorised, Volvo trained personnel using only Volvo Genuine Parts. He also knows that your machine has been designed and manufactured by one of the largest organisations in the industry – The Volvo Corporation. Over the years the Volvo brand has become synonymous with quality and safety. Naturally, this applies equally to its construction equipment. But there's more to our name than that. Volvo also represents productivity boosting technology at its best, coupled with a commitment to a sustainable environment. Ultimately, Volvo is all about the interaction between man, machine and nature.

So, once the L220D becomes a member of your team, you'll soon find that not only do you save on costs, you also win on performance. That has to make good business sense.

# THE SENSE TO PENETRATE AND BREAK OUT - QUICKLY

Once behind the wheel of the new Volvo L220D, in seconds you'll feel the difference. How seemingly effortlessly the new machine digs into the shot rock and works its way up the face, filling the bucket to the brim. And how quickly the lift-arm unit moves as the loader completes its loading cycle. What's the secret?



## Load-sensing hydraulics – a first in the 30-tonne class

While you were busy loading, the world's most advanced hydraulic system was earning its keep. Load-sensing hydraulics were unheard of among 30-tonne loaders - that is until now.

The heart of the system, a variable piston pump, controls the flow and only pumps oil where and when it's needed. A textbook example of superb hydraulic power, optimum hydraulic efficiency and low fuel consumption.

## TP-linkage means strength and control

TP-linkage is yet another class feature on the L220D that represents a first in the 30-tonne class. Volvo's patented TP-linkage lift-arm system delivers superior breakout torque throughout the lifting range, combined with a high on exact parallel lift-arm action.

Never flagging as you work your way into the face, TP-linkage gives

*Thanks to load-sensing hydraulics, the Volvo L220D delivers superior productivity while using less fuel.*



you full control over attachment and load. And as you complete your cycle, the ingenious T-link allows the bucket to smoothly empty your load into the truck.

**The Volvo L220D is all torque**  
Powered by a high performance low emission engine with unique twin pump intercooling, the Volvo L220D delivers 1530 Nm of torque already at 800 r/min, and all the way up to 1645 Nm



at 1450 r/min. This translates into excellent rimpull and hydraulic power at low engine revs. Which, combined with load-sensing hydraulics, means we're talking lower fuel consumption, significantly longer engine life and, of course, superb economy.

Equipped with this arsenal of productivity boosting – and cost reducing – features, we're confident you won't find a more

profitable way to move shot rock than from behind the wheel of a Volvo L220D.

*TP-linkage gives added strength as the bucket work its way up the face.*



# HEAPS OF PRODUCTIVITY

Imagine for a moment that you're stockpiling with a Volvo L220D. You see how easy it is to fill the bucket with material. All 5,2 m<sup>3</sup> of it\*. But your experience tells you there's more than 5,2 m<sup>3</sup> in the bucket in front of you. You're right. Volvo's buckets are specially designed for the TP-linkage system. That means that not only do the buckets fulfil the SAE rating standard, they can also hold up to 10% more material, thanks to a larger bucket opening and greater heaping capacity. In load and carry work that little bit extra makes a world of difference.

## Compact and stable loading

When Volvo builds loaders there's no compromise. Just look at TP-linkage, where the carry position is right next to the front axle. What's more, rear overhang is minimal in relationship to the long wheel base. The result is a stable load and carry machine that can stockpile on a steep slope. To make your loader even steadier, simply add our new Boom Suspension System to eliminate any rocking.

Volvo loaders are often more compact than their competitors. Why? Because we've always believed that too much counterweight is ultimately counterproductive.

## Feel the pulse

The Volvo countershaft transmission has been further refined with new Pulse Width Modulation to give smoother gear shifts. Simply select forward, reverse or kickdown – APS II shifts gear for you. The system also offers 4 different gear-changing modes for varying conditions: primarily Heavy mode for short cycle work and Light mode for load and carry. Not only is



*Volvo offers the widest of range of buckets on the market.*

APS II the most operator-friendly gearshifting system on today's market, it also ensures that your L220D is more than a match for your operational needs.

## Volvo axles with oil-cooled wet disc brakes

The AWB axles are fully floating and equipped with forced oil-cooled wet disc brakes for gentle



and effective braking. Fully sealed, the brakes are well protected from dust for long service life.

All in all the Volvo L220D is a quick and safe loader to operate – especially in the toughest of stockpiling operations.

*\* Bucket size varies from 4,5 – 14,0 m<sup>3</sup> depending on the density of the material.*

*A Volvo bucket carries up to 10% more material than the SAE-standard.*



# THE SENSE TO PUT THE OPERATOR IN CONTROL

The new L220D offers operator efficiency in abundance. We've further refined our award winning Care Cab concept to provide unparalleled comfort, safety and ease of operation. Indeed, the first thing to strike you as you step into the new Volvo Care Cab II is the attention to detail. All the instrumentation is just where you'd expect it to be – right in front of you. Adjust your seat, steering wheel\* and hydraulic lever console. Now start the engine.

*The large wrap-round windscreen, together with CDC\*\*, make operating the L220D a pleasure.*



**Let your fingers do the work**  
Engine running and comfortably seated, you start to put the loader through its paces. You select forward and APS II comes into its own. What could be easier? What's more, the pilot-operated working hydraulics allow you precision control of the attachments with the fingertips of your right hand. You'll also sense greater power than you're used to. Even the slightest movement of the levers gives maximum force. That's what we call manoevrability.

## **Enjoy the view**

Few other cabs can match Care Cab II for all-round visibility. The wrap-round windscreen gives you an excellent view of the attachments. And thanks to the new Contronic II you'll be keeping a watchful eye on the status of your loader.

## **Enjoy the sound of silence**

The new cab is vibration dampened and sound-insulated thanks to a rubber mounting system and heavy duty insulation. The atmosphere is controlled, with the heating and ventilation supplying air from the highly efficient dual-filter system.

## **Comfort Drive Control\*\* – sit back and relax**

A long shift exposes you to the risk of static muscle strain. The answer is Comfort Drive Control, which allows you to steer and shift – quickly and precisely – with small, light movements of your hands and fingers.

*\* Adjustable steering wheel is available as an option.*

*\*\* CDC is available as an option.*





# A SENSE OF SECURITY

Wheel loaders work under very trying conditions in some of the most remote locations on earth. That's why you have to be able to monitor your machine's condition at all times. If there is even the slightest hint of a problem, immediate action must be taken. The loader is your livelihood. Building loaders that last is ours.

## Service-friendly

Volvo wheel loaders are known to be among the most service friendly machines on the market. The Volvo L220D is no exception. The radiator swings out for easy service and maintenance in dusty environments. The service points are readily accessible, and, to make routine maintenance even easier, the L220D can be equipped with Volvo Wheel Loaders Automatic Lubrication System\*. In fact, the first and in some ways most important service technician is the operator himself, who receives ample information at delivery, including an instruction video.

## Contronic II - the first line of defence

Our refined digital watchdog, Contronic II, monitors the machine's main functions at all times, instantly warning you of any problems. The information is displayed in plain text in the language of your choice. The system also reminds you of periodic service eight hours in advance and provides an on-the-spot diagnosis should any problem arise. The data stored in Contronic II is a vital source of information to our service technicians, which they can download into their PCs for immediate troubleshooting.

*Regular maintenance is easy with these service friendly solutions.*



**Volvo Construction Equipment trains 5000 new service technicians every year**  
We train one service technician every 90 minutes – round-the-clock – in our global network of service schools. We can reach you with service and support wherever you are. So if your Volvo L220D is in need of a few parts, Volvo Construction Equipment is happy



to supply Genuine Volvo Parts at very short notice.

**Peace of mind in black and white**

Downtime is not a word that echoes off the walls at Volvo Construction Equipment particularly often. But that doesn't mean you should leave your operation wide open. With Volvo service



contracts you are covered by a guarantee package as advanced as the machine you bought.

*\* Option.*

*Thanks to PROSIS, our service technicians have all necessary parts and service data at their fingertips.*

# LOW ON EMISSIONS, LOW ON NOISE

Care for the environment has become a major global concern. Ever more stringent measures are on the legislators' drawing boards, and demands are made on every conceivable aspect of our daily lives to help keep our environment clean. Volvo has always tried to stay one step ahead of the law-makers by harnessing technology to build machines that are considerate to the world we live in.

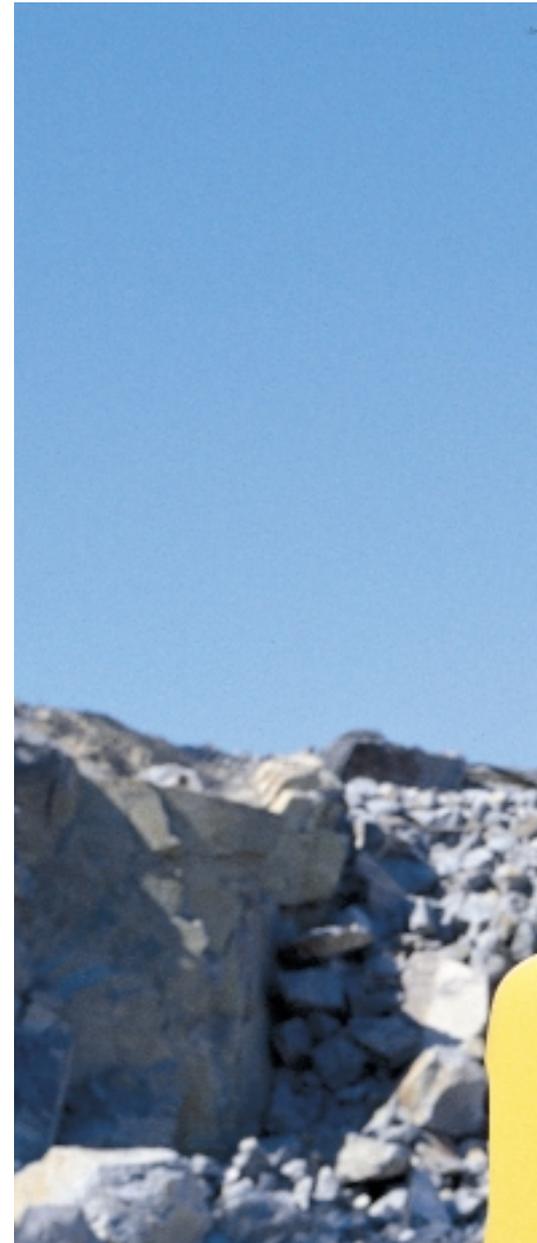


## Cleaner performance

The L220D is equipped with a world beating Volvo high performance, low emission engine. The secret behind the two seemingly incompatible concepts - higher performance and lower emissions - is improved combustion. The injection and unique twin pump intercooling systems create a more efficient mixture of oxygen and fuel, giving the loader greater engine power, quicker acceleration, increased rimpull, lower fuel consumption - and lower emissions.

## Give your ears a rest

The low emission engine, coupled with good sound insulation, help further reduce internal and external noise levels. The Volvo L220D complies with all known limits.



## 90% of the L220D is fully recyclable

To reduce the environmental impact of our loaders, all cast iron, steel and other metals, as well as

*Noise levels inside and outside the L220D are so low that we really have something to talk about.*



glass and polymers, are recyclable. Plastic components are also marked for recycling. The coolant used in the cab's air-conditioning is CFC-free and the L220D offers biodegradable oil for the hydraulic system as an option. Moreover, the

manufacturing process is environmentally registered in accordance with EMAS.

As we approach the new millennium, Volvo Construction Equipment is poised to offer its customers machines that are not

only cost-efficient but also environmentally considerate.

# WHY IT'S EASY TO GET ATTACHED TO A VOLVO L220D

## Care Cab II

Volvo once again takes the lead in operator efficiency and productivity. Superb operator comfort, safety features such as ROPS-FOPS protection, allround visibility and fingertip control of the lift-arm unit with pilot-operated hydraulic levers, are just a few of Care Cab II's features.

## Contronic II

Volvo's world beating machine watchdog not only keeps the operator informed of machine status, but also gives the service technician a complete overview of its operating history. Makes troubleshooting a quick and efficient process.

## TP Linkage

Unique patented linkage system combining parallel lift action with high breakout torque throughout the whole lifting cycle.

## Easier daily maintenance

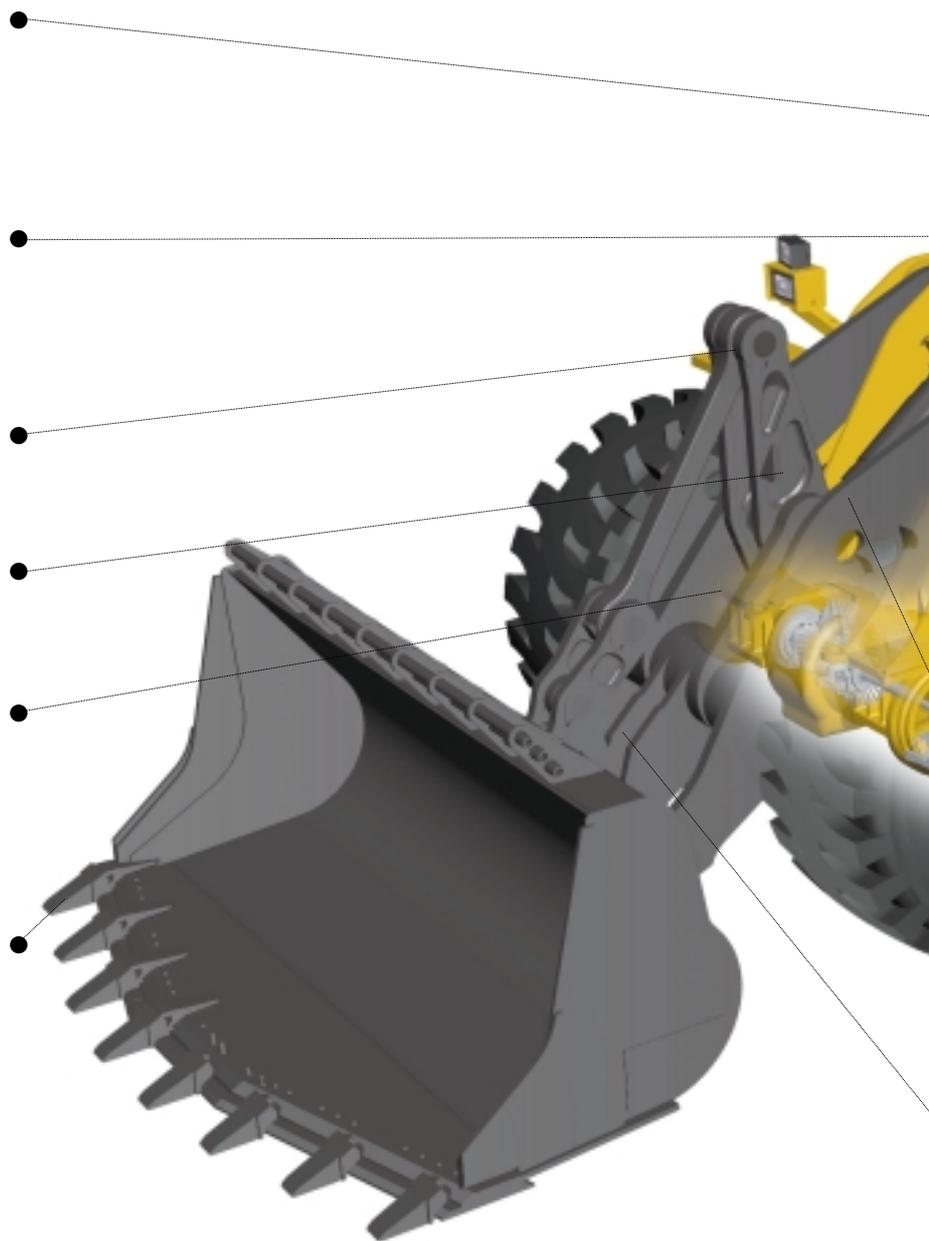
Volvo Wheel Loaders factory mounted Automatic Lubrication System\* allows for more operating time.

## Volvo axles

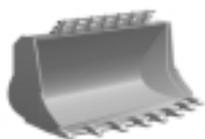
Volvo's concept of outboard mounted forced oil-cooled wet disc brakes, together with rugged fully floating axles, has been put to good use on the L220D. 100% differential lock on the front axle is standard. Naturally, extra oil cooling is an option for those really tough operations.

## Volvo Genuine Attachments

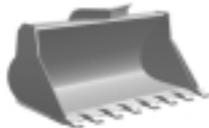
Volvo Genuine buckets and attachments are designed and manufactured to match TP Linkage perfectly, making the L220D quick and efficient to operate.



### Buckets & grapples



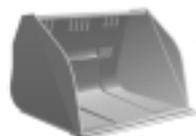
Spade nose rock bucket with teeth



Straight bucket with teeth



Straight bucket with edge savers



High-dump light materials bucket



Unloading grapple



Tree length grapple



- **Low external noise levels**  
An isolated engine compartment with an external radiator and hydrostatic cooling fan help to keep external noise to a minimum. The L220D's external noise levels are lower than all known legislation.
- **High Performance Low Emission Engine**  
Volvo TD122KLE engine with twin pump intercooling means high torque from low r/min as well as low emissions.
- **Excellent Serviceability**  
Easily accessible service panels and service points, a swing-out radiator for quick cleaning and Contronic II service watchdog are just a few of the L220D's service-friendly solutions.
- **Comfort Drive Control (CDC) \***  
A more comfortable way of steering the L220D in short cycle applications.
- **Load-sensing steering**  
Low fuel consumption and easy steering at low r/min are just two benefits of the load-sensing steering system.
- **Load-sensing hydraulics**  
Unique in a 30-tonne loader, the load-sensing hydraulic system means you use just the right amount of oil at the right time. And that means less overall engine power and fuel needed to do the job.

\* Option

Certain machine-specific deviations can occur. See data sheets

- **APS II and Pulse Width Modulation**  
A choice of four gear shifting programs and the market's first, and now even better, automatic powershift makes operating the loader a pleasure. Just choose the right shifting mode, then forward, reverse or kick-down, and, together with Pulse Width Modulation, gearshifting couldn't be easier or smoother.
- **Oil cooling-heating system**  
The engine, transmission, axles and hydraulic system are equipped with an ingenious integrated cooling/heating system. The initial warmth of the engine is used to heat the cab and other components as they warm up. Later these components are cooled by the engine cooling system.
- **Boom Suspension System**  
This option makes load and carry operations quicker and less bumpy.
- **Long Boom**  
This option allows the L220D to load high-sided trucks with ease and efficiency.

### Specifications

Engine:	Volvo TD122KLE
Output at	26,7 r/s 1600 r/min
SAE J 1349 net	257 kW 349 hp
Max. torque at	24,2 r/s 1450 r/min
SAE J 1349 net	1645 Nm
Breakout force:	239 kN*
Static tipping load:	
straight	22 000 kg*
turn 35°	19 350 kg*
at full turn	19 040 kg*
Buckets:	4,5–14,0 m <sup>3</sup>
Timber grapples:	1,8–3,7 m <sup>2</sup>
Operating weight:	29,7–31,7 t
Tires:	29,5–25
* Bucket: 4,6 m <sup>3</sup> , Tires: 29,5 R25 L4	



**VOLVO L220D**  
– 30 tonnes of business sense

**VOLVO**

**Volvo Construction Equipment Group**