

VOLVO CONSTRUCTION EQUIPMENT

# ECO OPERATOR



**MORE CARE. BUILT IN.**





ECCOPERATOR™

# INTELLIGENCE

**INTELLIGENCE** noun:  
- the ability to comprehend  
- to understand and profit from experience  
- having the power to bring into being.



# The operator makes a difference

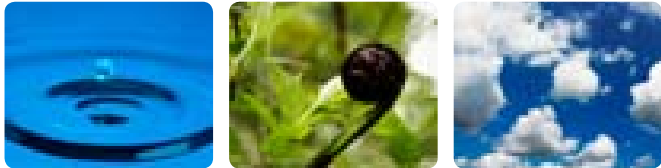
Train your operators to be Volvo Eco Operators – a fast and easy way to not only reduce fuel consumption and harmful emissions, but lower wear and tear on your machines. Proper planning and operation by trained operators can make a huge difference – especially in your profits.

**Good operators – more than meets the eye**

Machines from Volvo Construction Equipment have long been known for their low fuel consumption and environmental impact. But not even our machines, however advanced, can replace the important role of the operator. In the final analysis, the operator has the greatest effect on fuel consumption and productivity in today's modern machines. That's why we offer Eco Operator training to give your operators the practical and theoretical knowledge they need to become safer, more efficient and environmentally conscious operators.

**Advantages for you and your operator**

Volvo's Eco Operator training is an easy way for you to save money and the environment. It teaches operators correct machine operation and maneuvering as well as how to plan their work in the smartest way. You save on fuel, increase production and spend less money on maintenance. And because Eco operation often means easing up on the accelerator and smoother cycles, the operator's stress level goes down.





# HARMONY

**HARMONY** noun:  
- a harmonious state of things in general and of their properties  
- a design or composition as to produce unity of effect, as the harmony of the universe.



# Our most important job

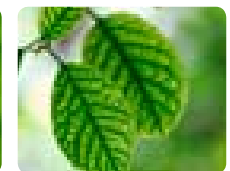
Concern for the environment has always been a core value at Volvo Construction Equipments. However, in light of our alarming climate changes, we need to work even harder. Reducing fossil fuel emissions is not only a big challenge, but an important one for our industry and mankind.

## **Everyone adds to the “greenhouse effect”**

Taking care of the environment is important for us at Volvo Construction Equipment. We can't ignore the fact that the manufacturing and operation of our excavators, wheel loaders and haulers contribute to the increased “greenhouse effect” – the greatest environmental threat of our time. During the coming years we need to insure that our manufacturing processes and products become more environmentally friendly. At present, all our machines are 95 % recyclable and we are leading the industry forward in hybrid technology with our hybrid wheel loader. But more needs to be done.

## **Eco Operator – all of us doing what we can**

At Volvo Construction Equipment we feel responsible to insure that our machines are used properly on worksites around the world. We want to make sure they don't use more fuel than necessary and that the continuous improvements we make to stop climate change are effective. This is why we developed the Eco Operator training program. It allows us a way to insure that our products increase the greenhouse effect as little as possible and it helps you in your environmental efforts.





# GROWTH

**GROWTH** noun:

- A process of becoming larger or longer or more numerous or more important
- economic expansion
- the growth of power.



# An Eco Operator increases your profitability

There's a wide-spread misconception that it costs money to be environmentally friendly. Reduced emissions doesn't mean reduced productivity and lower fuel consumptions doesn't mean lower profits. In fact, the opposite is true. An operator who keeps the environment in mind and works smart can increase productivity.

**Slow down and get more done**

Operating in both a productive and fuel efficient way often means easing up on the accelerator. Work doesn't get done faster by moving faster. Operators produce more by slowing down and working smarter. Reduced operator stress results in increased operating efficiency. Good planning and execution decrease wear on the machine and lengthen service life.

**Increased fuel prices**

The world does not have an endless supply of oil. In light of increased fuel prices, we must continue to research and develop alternative fuels – and we must reduce consumption.





**SKANSKA IN BRIEF**

- Skanska is a leading international project development and construction company
- the company was founded in 1887.







# “Considering our volume, training can make an enormous difference”

- We use over 10 million liters of diesel every year, so even slight reductions in diesel fuel consumption can make a big difference on the environment and our economy. So says Krister Persson, quality manager for Skanska Sweden AB, Region Asphalt and Concrete West, a company that invests heavily in training its operators in eco driving.
- We've lowered consumption by about five percent. That translates into a cash savings of about 250 000 euro and an emissions reduction of about 500 tons carbon dioxide.

## **An important competitive edge**

Krister Persson thinks it's easy to see the value of investing in eco driving.

- There are so many positive sides: not only do we reduce our impact on the environment and lower fuel costs and machine wear, but our operators have less stress, higher safety and a more secure working area.
- Today, we need to be proactive in creating the right conditions in order to reduce our own impact on the environment. It's an incredibly important competitive edge.

## **Ten machines save 70 000 liters**

Skanska participated in the training in cooperation with Murtans Driving School in Falkenberg, Sweden. The first session was held in the autumn of 2005 for 37 operators.

- To avoid disturbing normal operations, the course was held at the worksite using the operators own machine, says Mr Persson. An instructor gives tips on how to drive more cost-effectively. The operator then tries the new techniques and fuel consumption is compared between the two driving styles.
- It's difficult to say exactly how much fuel savings we've made

so far. Our statistics at one site are down 12 %, which is about 50 000 to 70 000 liters for ten machines. I would guess we have reduced consumption throughout the entire region by at least five percent.

- Another positive effect is that, after going through the training, many of our operators say they aren't as tired when they come home at night, even though they work just as much as before. Once a year, the instructor returns to ride with the operators in order to follow up and give new tips.

## **Training other employees as well**

The results of the course have been so positive, Region Asphalt and Concrete West decided to provide the training to the rest of the company, even those who drove their cars for private use.

- We ran the course for all of our trucks and cars, even those who drove to and from work. So far, about 300 of our 450 employees have go through the training. We see this as a great way to do something for the environment and ease our employees' stress.



**SKANSKA IN BRIEF**

- today, 60 000 employees are active in selected home markets in Europe, the US and Latin America
- Skanska is one of the world's ten largest construction companies. Skanska is headquartered in Stockholm, Sweden.



# “Some operators reduced their consumption up to 25 %”

At Terås Bergstäkt in Ljungskile, Sweden, Skanskas training in eco driving made big difference.

- A really big difference, says production manager Jerker Carlström. Following the first sessions, some operators reduced their consumption up to 20–25 %, without reducing productivity.

## **There's no excuse to use more fuel than necessary**

Terås Bergstäkt in Ljungskile is both a gravel pit and rock crushing facility. They sell between 200 000 and 300 000 tons per year, whereof 20–25 % is gravel and the rest rock products. Skanskas decision to train the operators in eco driving met enthusiasm.

- There's really no reason what so ever to use more fuel than necessary, says Jerker Carlström. You get the same amount of work done with less fuel consumption and save both the environment and money. And the operators feel less stress.

## **Operate the machine in the right way**

The operators themselves also found the training very good.

- The course isn't pointing fingers at anyone, but rather giving tips and helping us better ourselves, explains Morgan Pettersson, operator at Terås with over 30 years experience. It's about operating the machine in the right way and easing up on the accelerator, even when time seems tight. If you drive at a smooth and even pace you'll get just as much done as when you accelerate and brake hard.

And the training made difference.

- Yes, there's a big difference, says Jerker Carlström. Following the first sessions, some operators reduced their consumption up to 20–25 %, without reducing productivity. And even with my own private car I've managed to reduce my fuel consumption between 10–15 %.



**SCHLEITH IN BRIEF**

- Schleith GmbH was founded in 1953.
- Today it is Germany's leading company in the construction industry.
- Asphalt plants, limestone plants and gravel pits also form part of the company's framework.
- The head office is situated in Waldshut-Tiengen.





# Profitable environmental thinking at Schleith

It involves big numbers, but it's simple arithmetic. If you use up to 8 000 litres of fuel per day and can reduce this by up to six per cent, the savings will be enormous.

"And we do this without reducing efficiency," says Hansjörg Maier, a Production Manager and VP at the German construction company Schleith.

## **Goal-oriented training for the operators**

We met him at the Reinfeld hydroelectric power station, which is being rebuilt at a cost of 400 million euro. Schleith, who are responsible for excavation and earth-moving, have five new Volvo A40 articulated haulers among other construction equipment on-site. This choice was based on profitability as well as environmental concerns. "This is an environmentally-sensitive project. The water must not be polluted, and exhaust emissions must be kept to a minimum. Therefore new, fuel-efficient machines were the natural choice," said Hansjörg.

He praised Volvo for its innovative traditions, but also pointed out that there is another key factor in the equation: vehicle operators. Schleith have, therefore, invested in specific goal-oriented training for their operators. "For us, this is a matter of profitability, environmental consideration, and ultimately survival in this tough market," he said.

## **The results were visible immediately**

Andreano Luciano, a shift foreman at Schleith, agreed, describing the course in eco-driving as a great success. The course consisted of

several hours of theoretical work and additional practical training on the worksite itself. "We had a specially adapted training programme for the articulated hauler operators," he said. "The results were visible immediately. All of these people were already good operators, but even so they made some obvious improvements. This saves fuel and also reduces wear and tear."

By planning the transport cycles, and operating the equipment better, Schleith have gained considerable competitive advantages. The other shift foreman, Marc Sommerhalter, said that the course in eco-driving has reduced fuel consumption by around five per cent, despite the fact that the Volvo articulated haulers were already very fuel-efficient. His conclusion was very simple:

"We all have a responsibility to protect the environment, but as a company we also have the responsibility to protect our investment in machinery from unnecessary expenditure. Eco-driving makes it possible to fulfil both of these responsibilities at the same time."

Hansjörg Maier agree:

"Yes, that's true. Today you can't earn money at the cost of environmental protection."

**Cooperate**

Consult with other operators so that machines and trucks work together in the most effective way.

**The right equipment**

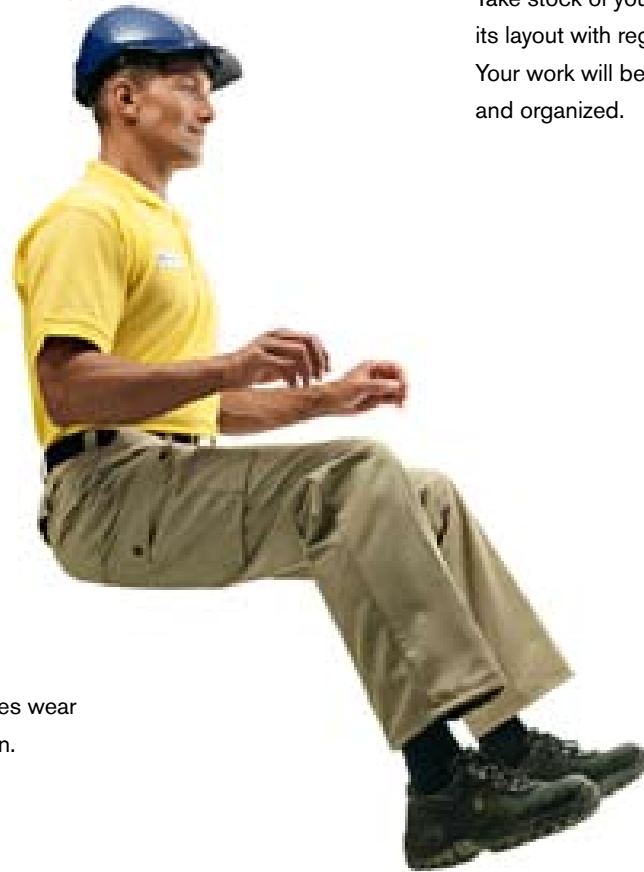
The right equipped machine saves on fuel and maintenance.

**Shut it down**

Don't idle unnecessarily.

**Correct pressure**

Correct tyre pressure reduces wear and lowers fuel consumption.



**Plan your work**

Take stock of your work area and plan its layout with regard to your machinery. Your work will be much more productive and organized.

**Slow down**

Reduce rpm's in order to stay in the most economical area.

**Ease up on the accelerator**

Easing up on the gas increases productivity.

# Small things make a big difference

The Eco Operator training is not a “driving school”, but rather an advanced course for those who are already operators. Its purpose is to refine operators' skills, knowledge and awareness of how to operate more ecologically and economically. It is designed to take only a day to complete and carried out at the operator's worksite.

## Eco Operator training agenda

### Introduction and theory

- Why Eco Operator
- Success stories
- Operator training: how to operate
- Discussion: Changing operating behaviour

### Practical

- Test driving, operating as usual
- Analysis and suggestions for change
- Instruction and practice

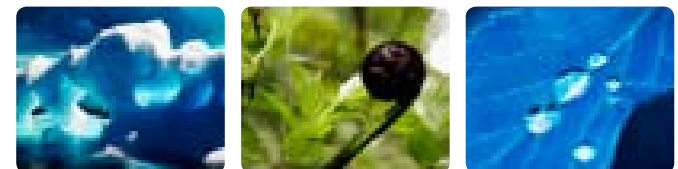
### Summary/conclusion

- Discussion and summary of exercises
- Tips for success on the job
- Awarding of Diploma and Volvo Eco Operator gifts as proof of completed course

### Follow-up can be arranged according to needs

Eco Operator is not available in all countries.

Eco Operator is a complement to the operators existing skills. Volvo Construction Equipment cannot take responsibility for the operator's safety performance.





Volvo Construction Equipment is different. Our machines are designed, built and supported in a different way. That difference comes from an engineering heritage of over 175 years. A heritage of thinking first about the people who actually use the machines. About how to help them be safer, more comfortable, more productive. About the environment we all share. The result of that thinking is a growing range of machines and a global support network dedicated to helping you do more. People around the world are proud to use Volvo. And we're proud of what makes Volvo different – **More care. Built in.**

*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  
[www.volvoce.com](http://www.volvoce.com)

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