

VOLVO CONSTRUCTION EQUIPMENT

# CARETRACK

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# CARETRACK AT WORK

CareTrack is a machine monitoring system specifically designed to be easy to understand and easy to use.

Its interface is web based and follows the same simple point and click rules that you'll be familiar with if you've ever browsed the internet.

The CareTrack system is organized according to three primary functions:

- **Mapping & Tracking**
- **Operation Reports**
- **Service Management**

This guide shows you sample screens from all three functions – with explanations of what each screen tells you.

Remember, the report information presented is completely downloadable – as both Excel® and PDF documents. You can also have the information emailed directly to your computer on a daily, weekly or monthly basis – whichever you prefer.

CareTrack features and functions are constantly being developed and enhanced, so while this guide contains technical information that was current at time of publishing, you will want to talk to your Volvo Construction Equipment dealership to get the most current benefits CareTrack can offer.



# MAPPING & TRACKING



**Figure 1:**

## Mapping & Tracking

The Mapping & Tracking screen allows you to keep track of every machine in your fleet in real-time.

The fleet is shown in the column on the left hand side (A). You can customize this column to suit your management needs.

The map area (B) can show detail down to street level or out to continental level. Highlight the machine or machines you wish to see in the left hand column and they appear on the map.

Clicking on one particular machine in the map will open the machine information window on the right (C).

This shows real-time machine hours, estimated annual machine hours, and the exact location of the machine as coordinates, or as a street address (D).

CareTrack also features Geofence and Timefence functionality, meaning you can be notified (via email, mobile phone or the CareTrack website) if a machine is being used outside a determined time period or geographic area. This helps to prevent unauthorized use.

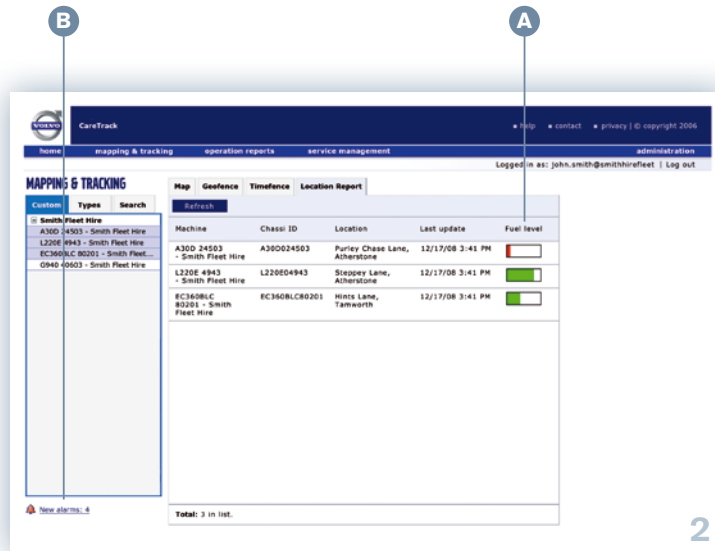
A Geofence is displayed as a coloured circle on the map (E). Zoom is possible all the way down to street level.

For companies with large fleets, or hire (rental) companies, the Mapping & Tracking screen is invaluable.

**Functions available in CareTrack Basic and CareTrack Advanced**

# MAPPING & TRACKING

# OPERATION REPORTS



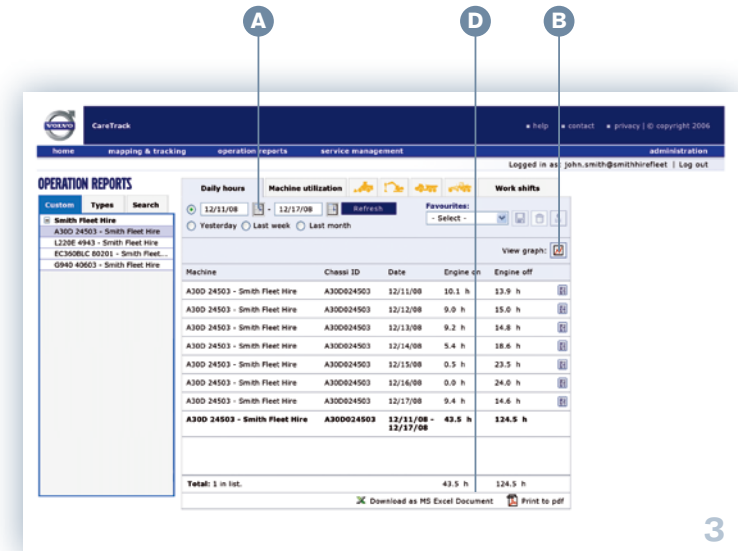
**Figure 2:**  
Real-time location and fuel level report

The location report on the Mapping & Tracking screen also shows you the fuel level of each vehicle in real-time.

A simple bar graphic (A) lets you see at a glance which machines are getting low on fuel, with green turning to red when refuelling is critical. This is an excellent aid in planning refuelling routes, for example.

For machines with CareTrack Advanced, all instrument panel alarms (B) result in immediate real-time notification. This information can also be sent to specific email addresses and mobile phones, ensuring the necessary people know about any problems with coolant, oil and so on.

**Fuel level function not available in CareTrack Basic.**



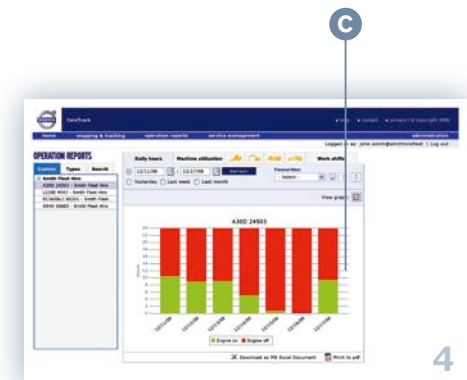
**Figure 3 and 4:**  
Daily hours report and graph

The daily hours report keeps track of how many hours per day machines have worked over a selected time period, for better planning of machine usage and fleet size. Time periods can be freely defined using the calendar interface (A). If desired, you may select to have these reports emailed automatically on a daily, weekly, or monthly basis.

By clicking on 'View graph' button (B), the data can be presented in an easily understood format that makes fleet management presentations very straightforward (C). All reports can easily be exported as Excel® or PDF documents (D).

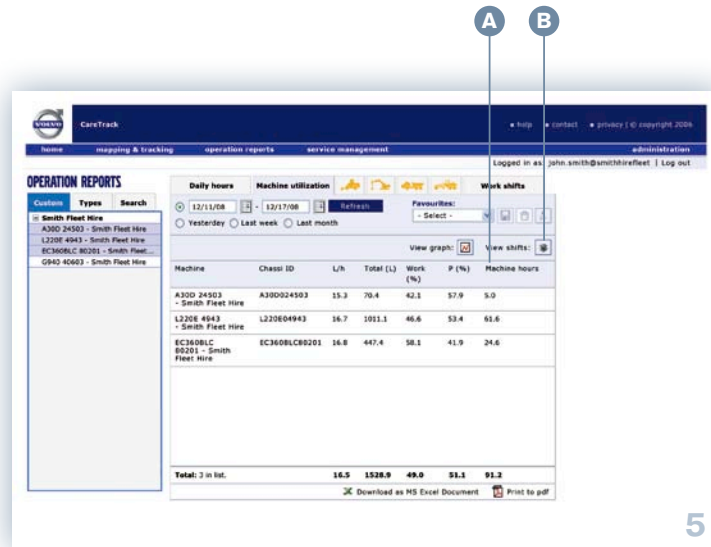
The daily hours report is an excellent and very accurate way to view and compare the extent to which machines are being used. For hire (rental) companies, it is a great tool to support invoice preparation.

**Functions available in CareTrack Basic and CareTrack Advanced.**



# OPERATION REPORTS

# OPERATION REPORTS



**Figure 5:**  
Machine utilization

Machine utilization is a general report which shows, for any selected period:

- fuel consumption rate (in litres per hour),
- litres consumed,
- percentages of time spent working and idling,
- engine hours (A).

This information is displayed for all machines utilizing CareTrack Advanced.

Fuel is a major operating cost, and this report can help dramatically reduce overall consumption by identifying which machines are idling excessively, or are otherwise consuming more fuel per hour than others.

To help target training or corrective action more effectively, reports can also be displayed by work shift (B).

Imagine the opportunities to promote efficiency improvement by being able to clearly demonstrate and document the results of changes in operating

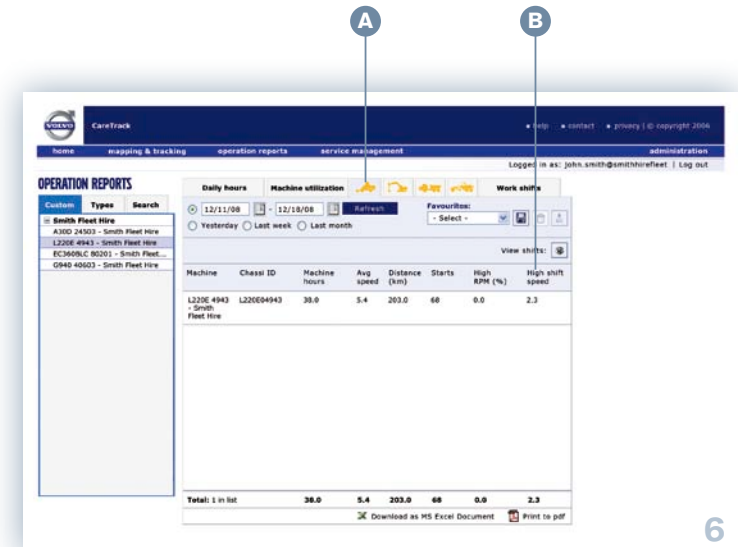
practices. Operator incentive programmes are easy to administrate and fully quantified by the data – you know who has improved and to what extent.

Aside from fuel consumption, there is another vital aspect of machine cost which has been difficult to manage in the past: the impact excess idling has on the consumption of machine hours.

On all machines, the service meter that registers machine hours continues to run while the engine is idling, bringing service costs forward and depleting the book value of the machine – during non-productive time. The machine utilization report again helps to monitor and take action against the causes of this hidden cost.

As with all CareTrack reports, you can subscribe, or view the data on demand in easily understood graph form, then export the reports to Excel® or PDF files.

**Machine utilization function not available in CareTrack Basic.**



**Figures 6, 7, 8 and 9:**  
Reports by machine type

Within the Operation Reports, you can access data specific to each of the main machine types: wheel loaders, excavators, articulated haulers and motor graders (A).

The data shown in these areas has been chosen to help you to gain a better understanding of how each machine is being operated – whether optimally or otherwise.

These reports provide an easy and structured way of following up machine usage – toward lower costs and higher productivity.

You can access these windows by clicking on the respective icon.

**Machine-type reports function not available in CareTrack Basic.**

**Figure 6:**  
Wheel Loader data

CareTrack detailed machine type reports can help you to make sure your wheel loaders are being used in the best way. The wheel loader data can show you if operators are over-revving engines or shifting from forward into reverse gears at speeds that are too high (B). Both of these cause unnecessary wear of the machine, which in the long run can lead to early component failure or need for repair.

CareTrack can also show a machine's average speed, number of starts made and distance travelled. This data can be broken down into shifts to help identify operator training needs.

# OPERATION REPORTS

**Figure 7:**  
Excavator data

The excavator report shows time spent and litres per hour in each of the different work modes, as well as percentage of time spent moving at high or low speed – helping you to ensure operators are utilizing the machine properly. The record of time spent using a hammer or a shear will help when invoicing work, and in tracking the working life of attachments.

Machine	Chassi ID	Machine hours	Engine work mode (l/h)					
			P	H	G	F	I	P
EC3608LC 80201 - Smith Fleet Hire	EC3608LC080201	44.1	0.0	28.7	0.0	1.9	4.3	0.0
<b>Total: 1 in list</b>		<b>44.1</b>	<b>0.0</b>	<b>28.7</b>	<b>0.0</b>	<b>1.9</b>	<b>4.3</b>	<b>0.0</b>

**Figure 8:**  
Articulated Hauler data

The articulated hauler report shows hours for the selected period, the average speed, distance travelled, percentage of time using retarder or service brake, and the time spent driving with the longitudinal differential lock activated. So for example, you can see the degree to which the operator is using the service brake instead of the retarder, thus causing unnecessary wear to the service brakes – which means avoidable cost.

Machine	Chassi ID	Machine hours	Avg speed	Distance	Retarder	Service Brake	Diff Lock
				(km)	(%)	(%)	(%)
L220E 4943 - Smith Fleet Hire	L220E04943	5.0	7.8	6.3	20.8	79.2	30.5
<b>Total: 1 in list</b>		<b>5.0</b>	<b>7.8</b>	<b>6.3</b>	<b>20.8</b>	<b>79.2</b>	<b>30.5</b>

**Figure 9:**  
Motor Grader data

Motor grader data is similar to that of the wheel loader – showing machine hours, average speed, distance travelled, number of starts, high revs and high speed gear changes from forward to reverse.

Machine	Chassi ID	Machine hours	Avg speed	Distance	Starts	High shift speed
				(km)		
G940 40603 - Smith Fleet Hire	G940041648	35.7	9.9	354.0	22	0.0
<b>Total: 1 in list</b>		<b>35.7</b>	<b>9.9</b>	<b>354.0</b>	<b>22</b>	<b>0.0</b>

All Machine Type reports can be subscribed to and are downloadable.

# SERVICE MANAGEMENT



**Figure 10:**  
Alarms

The Service Management window displays a list of alarms (A) with columns for Machine, Date, Type of alarm, and Counter (B). A detailed view of a specific alarm (C) is shown, including the machine name, date, and type of alarm. The Machine information panel (D) provides details about the selected machine, including its name, type, last update, and status.

**Figure 10:**  
Alarms

In the Service Management window is the Alarms sheet, which shows all the alarms that have appeared for the machines selected. If you see a new alarm alert at the foot of your window (A), this is where you find more details.

This window shows

- the same alarms that the operator will see in the machine cab,
- alarms generated by the website (for an upcoming service, for example),
- Geofence and Timefence alarms.

The date shown is the last time the alarm was generated. The type of alarm is shown with details (B). The counter (C) shows how many times the alarm has occurred since last acknowledged (first number) and how many have taken place during the last 7 days (second number).

For example, an alarm is received for low coolant level on a machine. Once the coolant has been

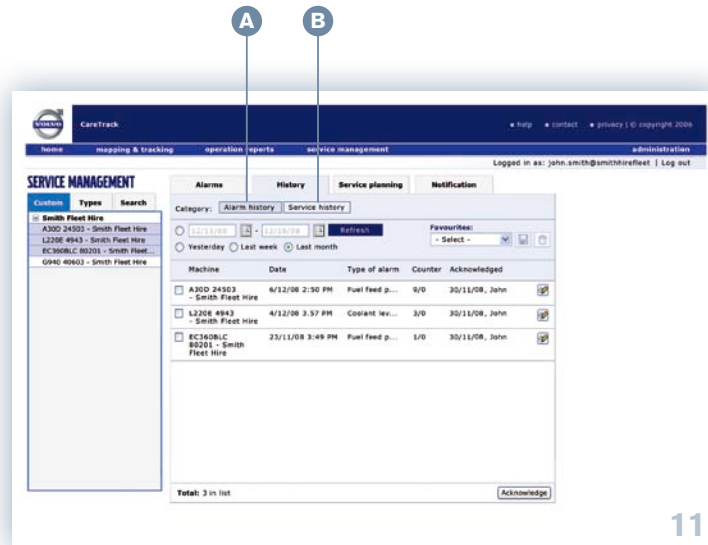
refilled, the “acknowledge” box is selected by the user, which sends the alarm to the History window for future reference.

By activating the Machine information window you can see the exact alarm code generated by the machine (D). Notes can be added to the alarms (for example: “JS to refill coolant 10.12.08”), which lets other users know action is being taken.

The alarms window is useful in ensuring that the responsible personnel are taking good care of their machines – and can help to identify recurring issues before they lead to a more serious consequence.

CareTrack can also send text alarms automatically to email addresses and/or mobile phones when certain problems occur. Which machines and alarms, as well as to whom they are directed, can be individually assigned – the information gets to the necessary people without delay.

**Alarms function not available in CareTrack Basic.**



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**Figure 11:**  
Alarm and service history

The history window provides an accurate record of alarms (A) generated over any selected period. The service history tab (B) can be used for building up a service history for machines.

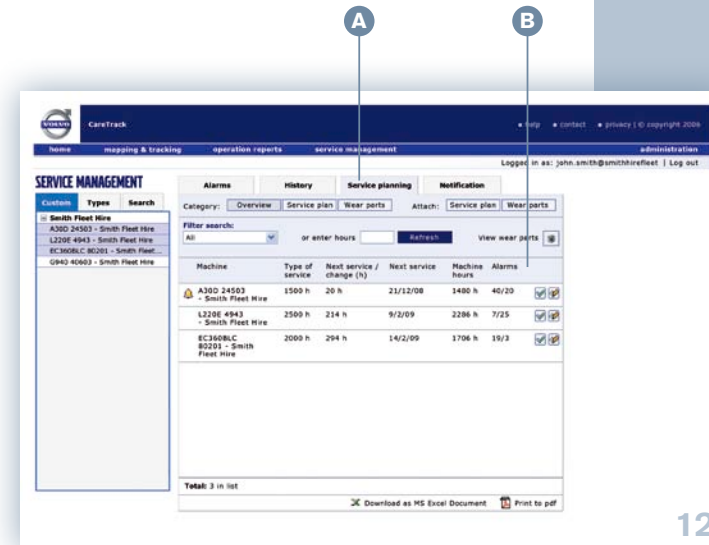
**Full alarm history function available in CareTrack Advanced, partial alarm history function (service, Geofence, Timefence alarms only) available in CareTrack Basic.**

**Figure 12:**  
Service planning

The service planning window removes the need to get machine status reports from machine operators. This is a much more effective and accurate means of planning machine service. The window shows

- the approaching service requirement,
- how many machine hours are left until that service,
- on approximately what date the service will be due, based upon machine usage,
- the current machine hours,
- how many alarms the machine has generated.

A bell icon (A) will appear to alert you when a service is almost due (alarm reminder can be user set) and the bell will turn red when the time for service arrives. CareTrack can also send alarms to email or mobile phones when the service is approaching, or is due.



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The two icons on the right hand side (B) are for acknowledging a service and for personnel to add machine notes.

Like all the windows in CareTrack, the service planning tool can also be used by your dealership – allowing them to plan and manage your machine services while you get on with running your business.

Your dealership is a powerful ally who can also use CareTrack as a tool to troubleshoot machines remotely. Using CareTrack, they can get technicians onsite in a more timely way and better prepared than if problems go undetected until failure and diagnosis has to be made onsite.

**All functions available in CareTrack Basic and CareTrack Advanced, except remote troubleshooting - Advanced only.**

The screens shown, offer a very good idea of how simply CareTrack can help manage machine operations. What they do not show is how CareTrack regularly provides updated information.

CareTrack always keeps you up to date.

With CareTrack, you will never have to wonder whether you are getting the best from your Volvo machines.



CareTrack is a fleet management system that allows you to monitor your entire fleet from any internet connected computer, from anywhere in the world. This document shows you the key screens from CareTrack and outlines just some of the benefits. With CareTrack, you will never have to wonder whether you are getting the best from your Volvo machines. **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**  
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