



KOMTRAX

KOMTRAX SATELLITE EQUIPMENT MONITORING

Access equipment information no matter where you are

KOMTRAX

KOMATSU
Driven by your success

WHY USE KOMTRAX?

Key Features & Benefits

Komatsu offers KOMTRAX – the technologically advanced satellite equipment monitoring system to provide you with the following key features:

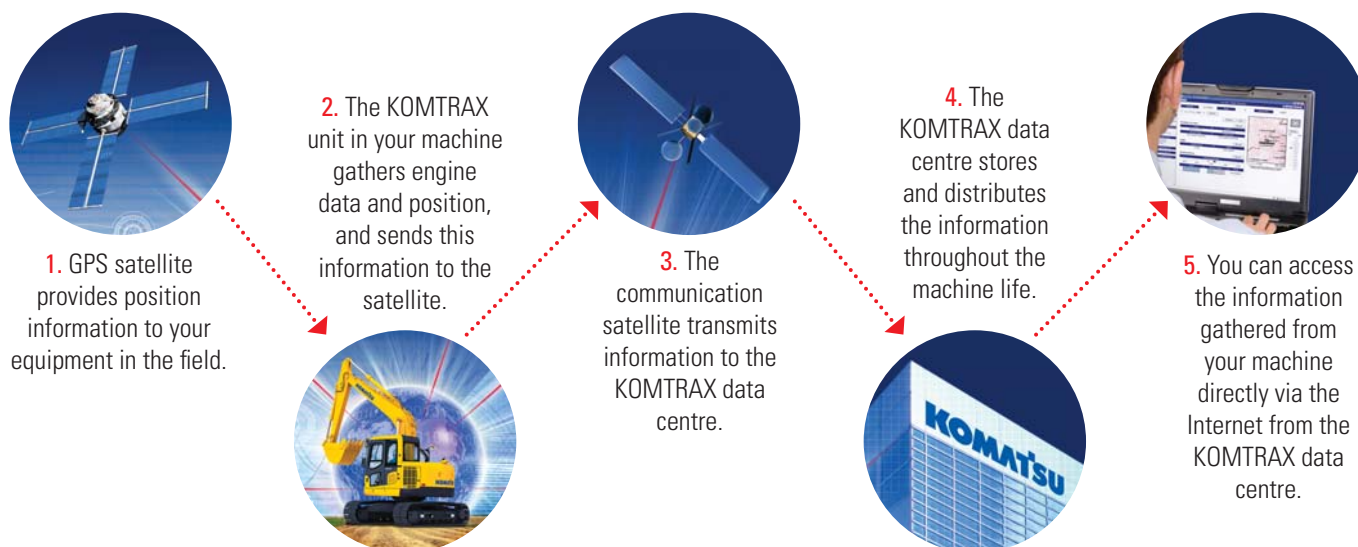
- **Fleet Management** - Improve your fleet utilisation
- **Machine Location** - Know exactly where your machine is
- **Work Monitoring** - Know what your machine is doing
- **Security** - Know if your machine is safe
- **Machine Performance** – Know whether your machine requires service or maintenance

KOMTRAX is a system that allows you to view all the information about your Komatsu equipment directly on your computer. This information is downloaded via satellite and will keep you fully informed on the type of work your machine is doing.

In today's fast changing environment information is key and the status and location of your equipment is paramount. Using KOMTRAX can track your equipment in the field and maximise output through increased efficiencies and just-in-time maintenance.



HOW DOES KOMTRAX WORK?



DATA AT YOUR FINGERTIPS

...anytime, anywhere

Komatsu's new generation machinery equipped with KOMTRAX sends data automatically without the need for manual action, allowing you to access the information you want at anytime. The information flow on KOMTRAX is completely secure through encoded transmission via the Internet. It is your valuable operational business information and yours alone.

The KOMTRAX system uses a generic web browser and provides easy to view maps, graphs and charts. It also has useful search and filter parameters which make finding what you need fast and easy. KOMTRAX data can also be downloaded directly into spreadsheet applications for further analysis. KOMTRAX also gives you more control over your equipment by providing you with critical information.

WHERE IS YOUR MACHINE EXACTLY?

Pinpoint the exact location of your machine

Model	PC300LC	Type	S	Serial No.	
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19 / 2 / 2008 [Update]

[Request]

Machine Location [Record]

LAT.	LONG.
S26.54.50.224	E152.55.15.122
Event Time	GPS Time
19/02/2008 01:15:00	19/02/2008 01:06:00

SMR [Record]

SMR Value	Date
462.7 H	19/02/2008

Working Status [Record]

Working Status

00:00 06:00 12:00 18:00 24:00

Fuel	Water Temp.	Date
[Bar Chart]	[Bar Chart]	18/02/2008

Mapping technology: © MapInfo Australia Pty Limited and its third party licensors, 2005.

Machine location

KOMTRAX utilises a network of global positioning satellites to tell you where your machine is at all times, showing you detail down to few metres. The position can be monitored using the map or latitude and longitude references. This will assist you with logistics, fuel deliveries and scheduled maintenance.

Using the zoom function allows you to track street names for your machine's location.

Search Condition

Select Machine: Machine List

Days: 3Day 7Day 17Day Period: 1 17 30

Conditions: No Communication: 72 hours or more No GPS Report: 72 hours or more No Usage: 7 days or more [Update]

Displayed: 8 Units

Mapping technology: © MapInfo Australia Pty Limited and its third party licensors, 2005.

Fleet map

The map function can be used to organise your complete KOMTRAX equipped fleet. All your machines can be viewed at the same time on one screen. The fleet map also has functions which allow you to examine your fleet condition. You can see which machine is idle, needs attention or is relocated.

IS YOUR MACHINE MAKING MONEY?

Easily identify the type of work your machine is doing

KOMTRAX provides timely information about your machine so that you can be more proactive and respond faster.

If you know the working status of your machine, how much fuel the machine consumes per working hour, and receive monthly summary reports, you will know how productive your machine really is.



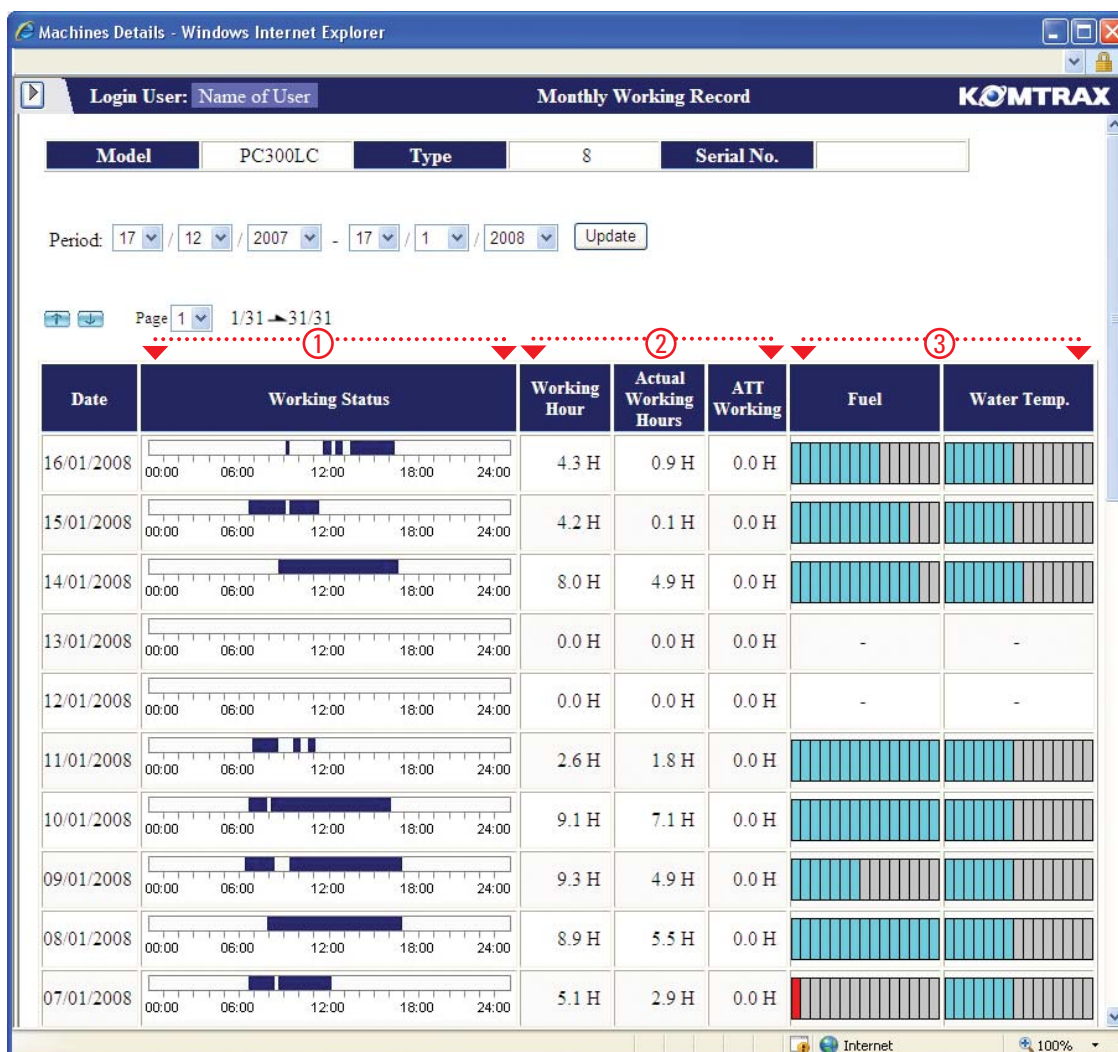
Working status

Operational information tells you on a daily basis how the machine is used and how productive your equipment is working.

Knowing the working hours helps to eliminate unauthorised use of the machine and knowing the fuel level helps to schedule the refueling of the machine.

Key

- ① Easy to follow bar chart shows daily engine-on hours.
- ② Total working hours are separated into actual work hours and attachment operating hours.
- ③ The screen illustrates the fuel level and peak water temperature reached at the end of the day.



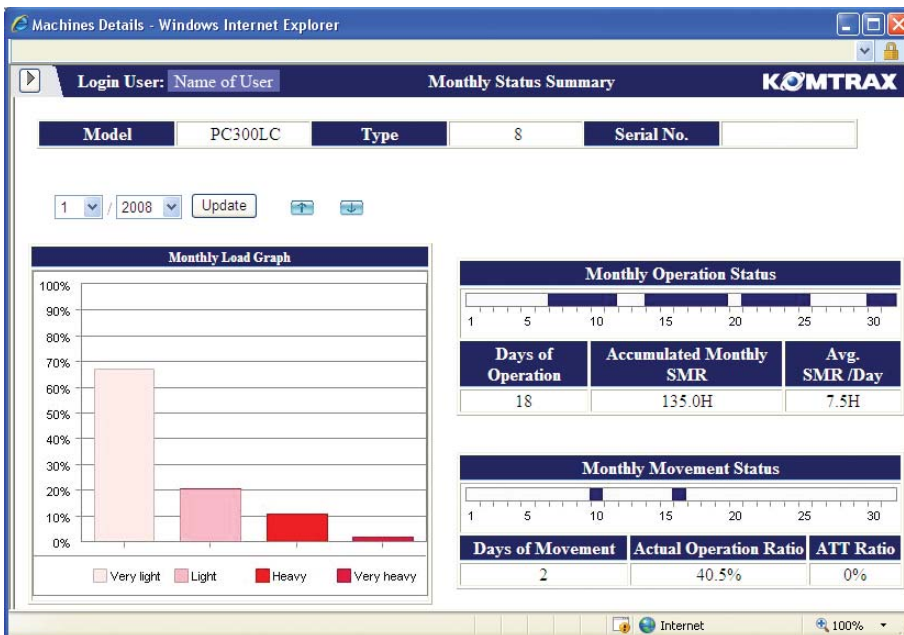


Fuel consumption

You will be able to see how much fuel the machine consumes each day. This information can be used to manage and reduce your fuel costs.

Combining the working status and fuel consumption helps you to calculate how much fuel is used by the machine per working hour. This tells you how efficient your equipment is working and where you can save costs.

The availability of the fuel consumption feature is dependant on the machine type and model.



Monthly status summary

Knowing the operating hydraulic pressure of your machine helps you to monitor your equipment's working condition. It works also as an early warning sign for potential overload or under load situations.

Viewing the status summary helps to assess whether you are using the correct size of machine for the task.

The availability of hydraulic pressure feature is dependant on the machine type and model.



IS YOUR MACHINE SAFE?

If the answer is no, then KOMTRAX will give you advantages to ensure your machine is safe. Special lock features and geofencing will reduce the possibility of misuse and theft.

KOMTRAX provides you with a number of lock functions to ensure that your equipment is only operated during designated days and times.



FORCED LOCK

Prevents machine activation without your permission.

NIGHT LOCK

Prevents machine activation for a specific time everyday.

CALENDAR LOCK

Prevents machine activation for a specific date and time.

PASSWORD LOCK

Prevents machine activation without password input.

REMOTE LOCK RESET

Enables Komatsu to set, delete and change all lock functions remotely on your request.

Calendar Lock feature may not be available on all machine models.

The screenshot shows the KOMTRAX web application interface. At the top, there is a login field for 'Name of User' and a 'Location' field. Below this, there are date and time selection options. The main part of the interface is a map showing the location of the machine, with various streets and landmarks labeled. A zoom control is visible on the right side of the map. Below the map is a table with the following data:

No.	Event	Event Time	GPS Time	LAT.	LONG.	Engine
1	Daily Data	17/01/2008 01:27:00	17/01/2008 01:18:00	S27.5.45.91	E152.54.43.80	OFF
2	Travel Dispatch	16/01/2008 11:53:00	16/01/2008 11:53:00	S27.5.41.255	E152.54.47.71	ON
3	Travel Dispatch	16/01/2008 11:23:00	16/01/2008 11:23:00	S27.5.14.162	E152.58.30.214	OFF
4	Travel Dispatch	16/01/2008 11:17:00	16/01/2008 11:17:00	S27.7.57.184	E152.57.42.61	OFF
5	Travel Dispatch	16/01/2008 11:12:00	16/01/2008 11:12:00	S27.6.20.101	E152.56.51.152	OFF
6	Daily Data	16/01/2008 01:19:00	16/01/2008 01:18:00	S27.6.19.19	E152.54.39.30	OFF
7	Daily Data	15/01/2008 01:22:00	15/01/2008 01:13:00	S27.6.17.133	E152.54.39.184	OFF
8	Daily Data	14/01/2008 01:22:00	14/01/2008 01:13:00	S27.6.17.162	E152.54.39.244	OFF
9	Daily Data	13/01/2008 01:18:00	13/01/2008 01:09:00	S27.6.17.162	E152.54.39.184	OFF
10	Daily Data	12/01/2008 01:15:00	12/01/2008 01:06:00	S27.6.17.133	E152.54.39.184	OFF

Travel alarm







KOMTRAX utilises the GPS system to track the actual machine position. Once the machine moves beyond a defined distance limit, a notification is generated and displayed online. The map function will then display each position of the machine and you can follow the machine while it is relocated. The machine will also send a signal once the engine has been started after relocation, to show that the machine is available for work.

Geofence

Komatsu can assist you in creating operational areas (Geofences) which indicate where your equipment is expected to operate. If your machine moves outside of its defined area, a notification is generated and displayed through web application.

Instant Notifications

If desired, instant email notifications or text messages can be enabled to provide you with real-time data on your machine.

-  Area – Notification on machines leaving a geofenced area.
-  Security – Notification of any engine starts, attempted starts while the engine is locked, and Low machine battery voltage.
-  Fuel – Daily notification of any low fuel.
-  Abnormalities – Instant notification of any abnormalities.
-  Cautions – Daily notification of any cautions.
-  Maintenance – Notification of machines due for service.

IS YOUR MACHINE IN GOOD HEALTH?

Keeping track of your machine performance

KOMTRAX helps you track the health of your machine . KOMTRAX will provide you with caution alerts, periodical maintenance, and abnormality codes to ensure your machine is productive.

The screenshot shows the 'Machines Details' page in a Windows Internet Explorer browser. The page title is 'Machines Details - Windows Internet Explorer'. The browser address bar shows 'Login User: Name of User' and 'Caution/Abnormality/Periodical Maintenance'. The KOMTRAX logo is visible in the top right corner.

Machine Details:

- Model: WA480
- Type: 6
- Serial No.: [Empty]

Caution:

Times of Caution: 00:00 to 24:00. A red bar indicates a caution event from 06:00 to 06:00. Type: Radiator Coolant Level. Date: 14/02/2008.

Abnormality:

Description	Date
BACK LAMP RELAY + OPEN CIRCUIT	18/02/2008 12:09:00

Periodical Maintenance: [Latest SMR : 1589.6 H (19/02/2008)]

Item	Replacement Interval	Last Maintenance Date	SMR @Last Maintenance	Hours to Next Maintenance
Engine Oil	500 H	06/02/2008	1501.5 H	411.9 H
Engine Oil Filter	500 H	06/02/2008	1501.5 H	411.9 H
Fuel Filter	1000 H	06/02/2008	1501.5 H	910.9 H
Hydraulic Oil Filter	2000 H	-	-	-
Hydraulic Tank Breather	2000 H	-	-	-
Hydraulic Oil	2000 H	-	-	-
Transmission Oil	1000 H	06/02/2008	1501.5 H	910.9 H
Transmission Oil Filter	1000 H	15/11/2007	1006.7 H	417.1 H
Axle Oil	2000 H	-	-	-
Fuel Pre Filter	500 H	06/02/2008	1501.8 H	412.1 H

Caution

KOMTRAX gives you the ability to view caution lights that flash on the monitor panel in the operator's cab. The caution explanation, occurrence and duration time are displayed on the KOMTRAX website for your review.

Periodical maintenance

In order to increase machine productivity and schedule maintenance, KOMTRAX shows for each maintenance item the replacement interval, service meter reading at last maintenance and when the next maintenance is due. Caution notices can be accessed live via the Internet.

Abnormality codes

Abnormality Codes are transmitted to Komatsu so that the mechanics can examine the machine prior to traveling to the job site. This information can also be used to identify the required parts for the maintenance - reducing your costs for mechanic's travel, maintenance and downtime.

MACHINE REPORTING

What benefits do monthly reports offer your business?

The screenshot shows an 'Energy Saving Operation Support Report' for a PC300LC-8 machine. The report is dated 27/12/2007 and was created on the same date. The customer name is 'Name of Customer'.

Customer Name: Name of Customer

27/12/2007 Created Date

Reporting Machine	Working Days	Working Hour	Latest SMR	Report Period
PC300LC-8	18Day	144.1H	275.3H	28/11/2007-27/12/2007.

Operation Analysis

Working mode ratio	Mode	Hours	Percentage
1	E (Economy mode)	0.0H	0.0%
2	P (Power mode)	144.1H	100.0%
3	B (Breaker mode)	0.0H	0.0%
4	L (Lifting mode)	0.0H	0.0%

Fuel Consumption Information

Accumulated Fuel Consumption	Average Fuel Consumption per Day
3206.5L	178.1L

Machine Load Analysis (Load Information of Last Month)

Load Map	Category	Percentage
1	Very light	63.2%
2	Light	26.4%
3	Heavy	8.8%
4	Very heavy	1.4%

Komatsu provides monthly KOMTRAX reports for your equipment which summarise the operation of each machine. These reports include abnormality codes, working mode and working performance analysis.

Komatsu technicians will examine each report and send it to you by email or post. If necessary you will receive recommendations on your machine's operation and health.

Assisting you to reduce your machine's downtime, improve your productivity and increase your profit.

The availability of information and reports is dependant on the machine model and type.



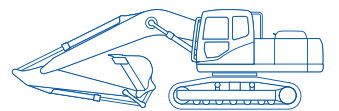
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