Using a high-speed network and an accurate system to provide total support for machines





GEOSCAN

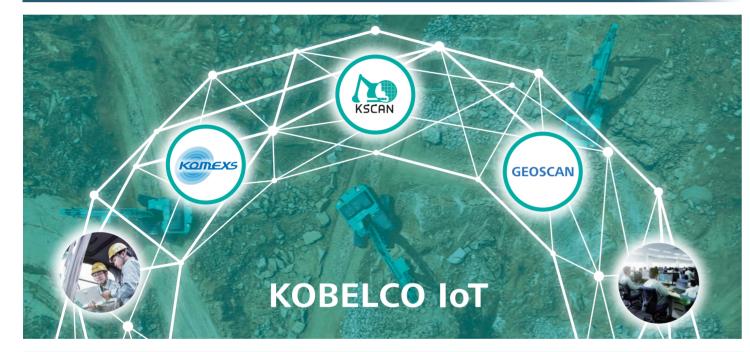
Note: Depending on the operating location of a machine or the radio wave state, some of the services might not be available.

You can manage the information of various machines through the Internet in your office. For strategic information management, cost management, and to be prepared for trouble, we provide a wide range of support for your business.

Operation data	Fuel consumption information	Warning alerts
Accurate grasp of operating hours	Improvement of fuel consumption	Emergency and abnormality notification
 It can be utilized as an indicator for operating time calculations needed for rental machines. A comparison of the operating times of machines at multiple locations shows which locations are busy and allows you to review the number of machines to invest in. 	 You can check the information on the performance in the different fuel-consumption modes and the idling times, and use them as indicators of improvements in fuel consumption. 	 When something abnormal happens, a warning alert is sent, and you will know the trouble even if you are not on site. With appropriate advice and handling, you can reduce machine downtime and repair costs. The system can be set to send an email alert if the machine is operated outside of the designated time and place.

Three benefits

KOBELCO Construction Machinery provides new solutions to improve on-site efficiency and durability.



Utilizing IT, IoT solution connects customers and KOBELCO Construction Machinery via machines.

We offer a truly valuable service that is necessary to your construction sites.

With KOBELCO's unique viewpoint, we will continue to develop innovative services that satisfy customers, such as our preventive maintenance system "K-SCAN" and our operating machine management system "komexs/GEOSCAN".

Note: This catalog may contain attachments and optional equipment that are not available in your area. And it may contain photographs of machines with specifications that differ from those of machines sold in your areas. Please consult your nearest KOBELCO distributor for those items you require. Specialist equipment is needed to use this machine in demolition work. Before using it please contact your KOBELCO dealer. Due to our policy of continuous product improvements all designs and specifications are subject to change without advance notice. Copyright by **KOBELCO CONSTRUCTION MACHINERY CO., LTD.** No part of this catalog may be reproduced in any manner without notice.

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Bulletin No.

K-SCAN **KOBELCO** KSCAN

KOBELCO's preventive maintenance system checks "the health state" of the machine every day.

KSCAN

Utilizing operation information acquired through IT, K-SCAN measures the machine's condition.

This is an innovative preventive maintenance system developed uniquely by KOBELCO.

When an abnormal operation of a machine is detected, it can suggest and take appropriate preventive measures to prevent critical failure. It helps improve the machine operation rate and reduce the running cost.

K-SCAN monitors your machines with a "Daily Condition Check" to measure the daily operation and conducts a "Latest Condition Check" at regular maintenance checks.





Major detecting items

Output	Cooling	Fuel	Air	Exhaust gas	Start	Oil
Engine/Pipe	Radiator	Injector common rail	Turbo/EGR valve/ air cleaner	SCR	Battery	Hydraulic oil filter
Machine efficiency Horsepower reduction state	Water temperature efficiency Oil temperature efficiency	Water temperature efficiency Oil temperature efficiency	Boost state Air cleaner clogging	Consumption of urea solution	Battery voltage	Hydraulic oil filter Clogging



Daily Condition Check

Water temperature, oil temperature, fuel injection quantity and output are measured daily, and these data are sent to KOBELCO.

When a value reaches a certain level, KOBELCO will recommend the appropriate maintenance. It will reduce engine and hydraulic oil pump failure.



The availability of Daily Condition Check and Latest Condition Check depends on the region.

Miles I

Latest Condition Check (Kobelco's original service)

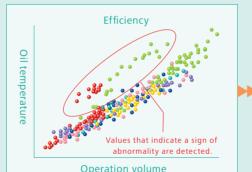
Service personnel will perform the automatic diagnosis mode with the machine in the high-idling state at the time of maintenance. The data are processed by the KOBELCO server in a timely manner, and a notification of the diagnostic results is sent to the customer. In addition to the Daily Condition Check, a detailed check will detect signs that are difficult to find in the daily check.



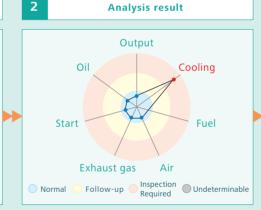
Sends diagnostics result data to KOBELCO

Case of preventive maintenance by Daily Condition Check (1): Prevention of radiator clogging

1 KOBELCO measures the transition of the state change 2 Analysis result



▶ Signs of maximum hydraulic oil temperature rise



► Hydraulic oil cooling is determined as "Inspection Required".



▶ The normal state is recovered by high-pressure air cleaning.

Case of preventive maintenance by Daily Condition Check (2): Optimization of attachments

Values that indicate a sign of abnormality are detected.

Values that indicate a sign of abnormality are detected.

▶ Signs of maximum hydraulic oil temperature rise

Output Oil Cooling Start Fuel

Analysis result

Hydraulic oil cooling is determined as "Inspection Required".

Machine inspection and countermeasures



 Usage that exceeds the machine performance is revealed, and the specifications of the machine are reconsidered and selected.