Remote Expert Support

Efficient Repair: The Role of Remote Support

Construction machinery is exposed to heavy loads and extreme conditions. The challenges faced by construction equipment designers and operators range from mechanical failures to electronic malfunctions. These problems can delay the progress of construction projects, lead to significant cost increases and jeopardize worker safety.

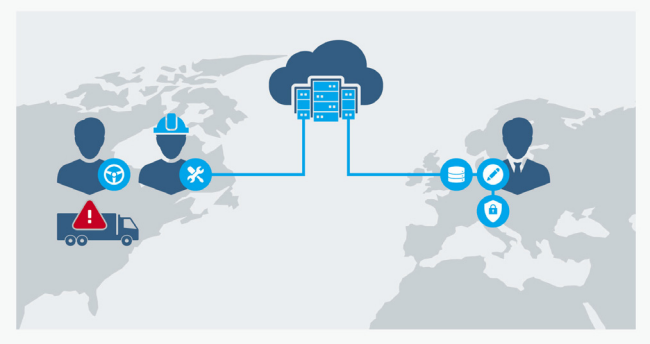
Solving complex vehicle problems remotely with expert support

Traditionally, the rectification of such problems requires the deployment of technicians on site, but without precise knowledge of the machine and the error pattern, they are often unable to solve the problem.

can provide a quick remedy. This approach therefore has a number of disadvantages, including time delays, high costs for travel and maintenance teams and the inability to respond to problems in real time.

Experts help from a distance

Remote support is proving to be a game changer in the construction machinery industry. This technology makes it possible to localize problems and challenges with construction machinery remotely and define remedial measures. In abstract terms, this creates a connection



Digitalization creates consistency in aftersales

between the problem with the machine and the experts, who may be in a different location. This can be done in different ways. In the simplest case, part of the diagnostic system is integrated into the machine so that the remote expert can carry out the complete diagnosis remotely and send the technician on site with the repair instructions and the appropriate parts. However, the requirements for this are not easy to meet.
Alternatively, the machine operator can be equipped with a diagnostic system. In the event of a fault, he connects to the machine and the expert via the diagnostic system, so that the latter ideally carries out the diagnosis from the office and then the machine operator carries out the troubleshooting for simple problems and a technician otherwise. If the diagnostic system is installed on a smartphone, direct communication can even take place, which in difficult cases creates the possibility of approaching the cause together. In most cases, the advantage will far outweigh the training required by the machine operator. If such a solution is not possible for logistical reasons - for example, because the machine operator cannot be equipped with a smartphone or cannot access the diagnostics - remote support ultimately also helps the technician. Time and again, there are error patterns that he cannot clearly assign to a solution with his level of training or due to unclear messages in the diagnostic system. In this case too, an expert with remote access can help and guide him to an efficient repair.

Solutions with Softing TDX

The proven Softing TDX workshop diagnostics system offers ideal support in the cases mentioned. Normally, the technician carries the diagnostic device with him when he is called out for repairs. He has either downloaded the necessary diagnostic routines and repair instructions to his computer in advance or he retrieves them from the cloud on site. If they are unable to reach their destination using the existing localization mechanisms, they can connect to an expert via the cloud, who connects to the computer and carries out their own diagnostics on the machine. The technician on site can intervene at any time and, for example

operate switches or check displays.
The scalability of the solution also allows it to be installed on a smartphone. This can be the complete solution or a reduced version, which is then given to the machine operator. The connection via the cloud ensures that consistent information is accessed - by the machine operator and the technician.

Conclusion

Remote support is proving to be an indispensable tool for the construction machinery industry. With the ability to identify and solve problems remotely, it contributes significantly to the efficiency, cost savings and safety of construction projects. In particular, the reduced downtimes resulting from the significantly improved fault localization and the subsequent rapid repair with spare parts that are already on board mean that remote support is playing an increasingly important role in the construction machinery industry. ■

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