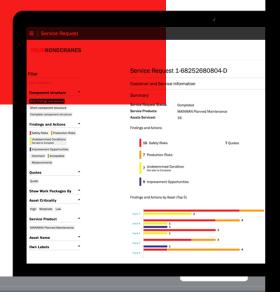
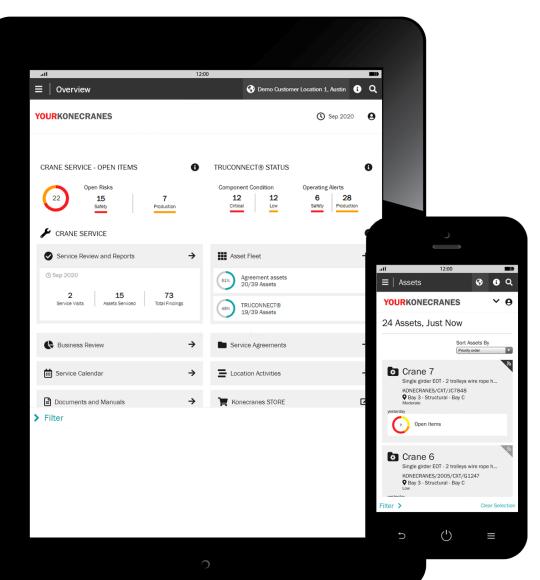


yourKONECRANES.com

Customer portal quick guide

09/2020





Introduction

Customers with a maintenance agreement and/or TRUCONNECT® Remote Monitoring have access to yourKONECRANES.com, our cloud-based customer portal.

Usage data, maintenance data and asset details are linked, giving a transparent view of events and activities over any selected time interval. Aggregated data can be viewed, analyzed and shared quickly, for a single asset or an entire fleet. Insights can be drawn by observing anomalies, patterns and trends, helping users make informed maintenance decisions.



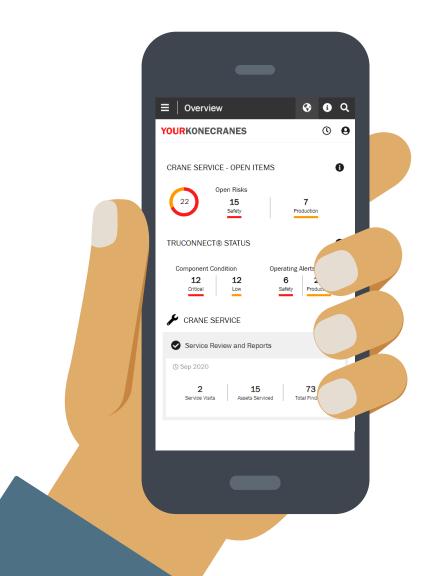
Anomalies can show up as faults, such as overloads. These events are considered abnormal and should be addressed promptly as they occur. Knowing when an overload occurs is the first step in identifying its cause.



Patterns help reveal relationships between variables. For example, recurring alerts such as overheats indicate where changes in equipment or process may be desirable.



The study of **trends** can help prioritize corrective action and investments. Analyzing data behavior over time makes predictive maintenance increasingly feasible.



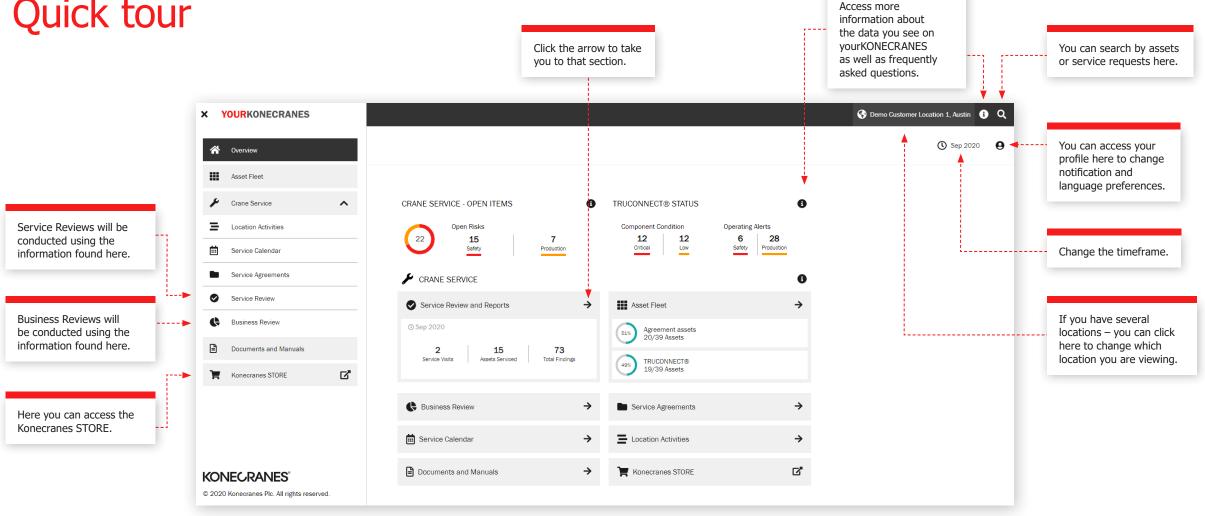
Your service data - streamlined

yourKONECRANES streamlines data access by organizing large volumes of information—including inspection and maintenance findings, TRUCONNECT data and alerts, asset lists and service spend—into easy-to-read graphs and charts in a single location.

You can see fault history and prioritized assets according to chosen criteria for a quick view of pain points for a single asset or across their entire fleet.

The portal also offers data archiving and retrieval options, including document uploads and electronic reports suitable for printing. In addition, yourKONECRANES provides a possibility for you to receive automated e-mail notifications of available reports.

Quick tour



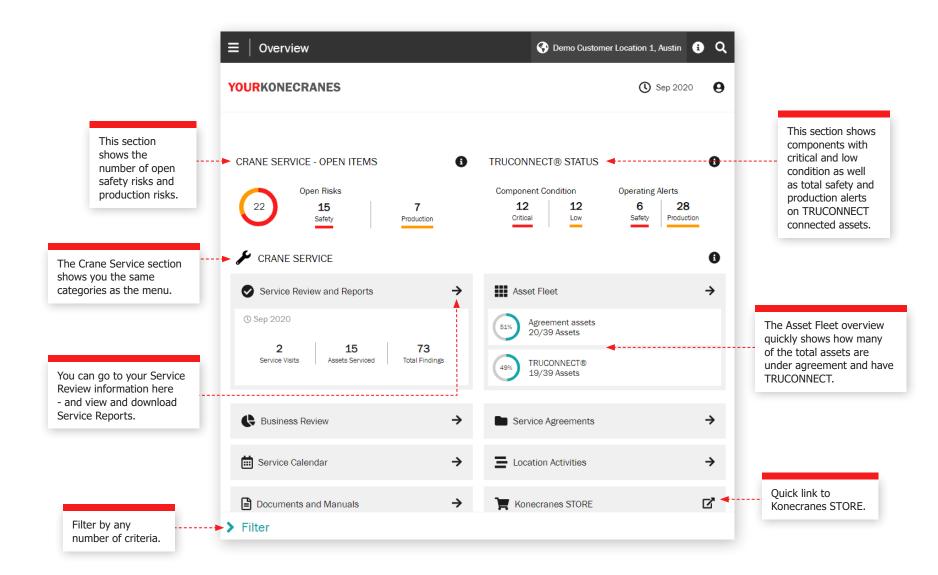
Overview

The **Overview** page shows open items including open safety risks, production risks and TRUCONNECT statuses that require immediate attention.

If a risk has been identified for a component and a repair has not been completed, then the fault is considered open.

Open TRUCONNECT items show the number of components having a design working period (DWP) or remaining service lifetime under 10% as critical and those with a DWP under 30% as low.

The Service Review and Reports section shows the number of service visits, assets serviced and total findings on those assets in the selected timeframe.



Assets

TRUCONNECT Asset Type

CXT SMARTON Smarton4

The **Assets page** gives you a **fleet view** that can be sorted by priority, asset criticality, date and alphabetically. Sorting by priority gives you a clear view of safety and production-critical issues.

such as Open risks, Service history, Material History and Service spend. All reports split by assets and can be generated in PDF or Excel.

Crane 8 Single girder EOT - 2 trolleys wire rope hoists

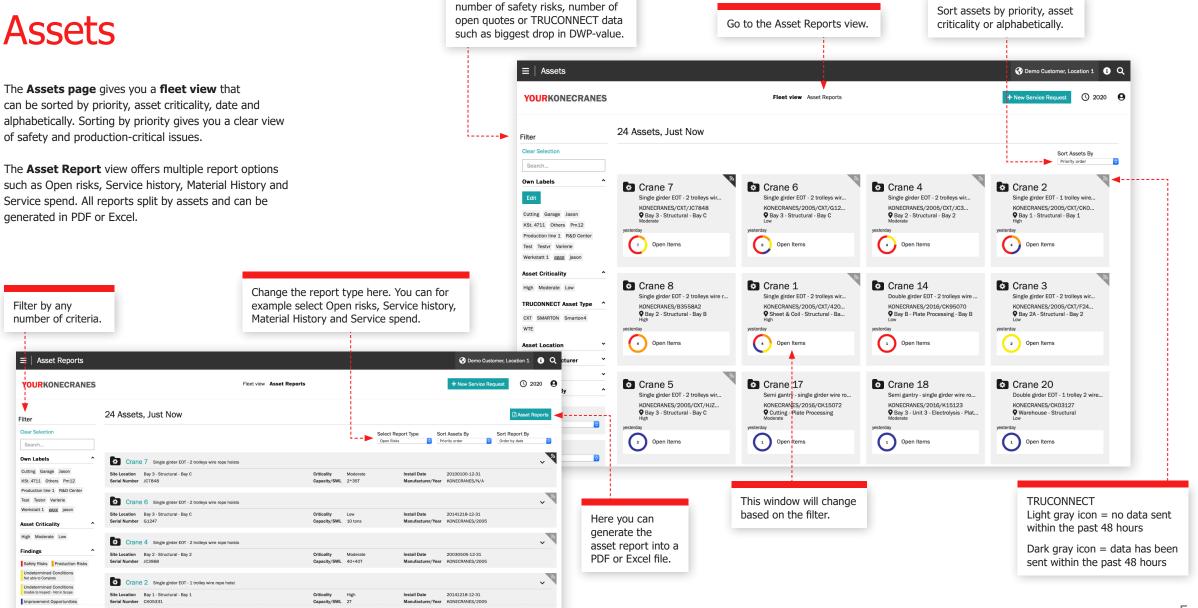
Install Date

Capacity/SWL 2x3.2T

20030505-12-31 Manufacturer/Year KONECRANES/N/A

Site Location Bay 2 - Structural - Bay B

Serial Number B3558A2



Select the parameters for how to view the assets. For example –

Activity

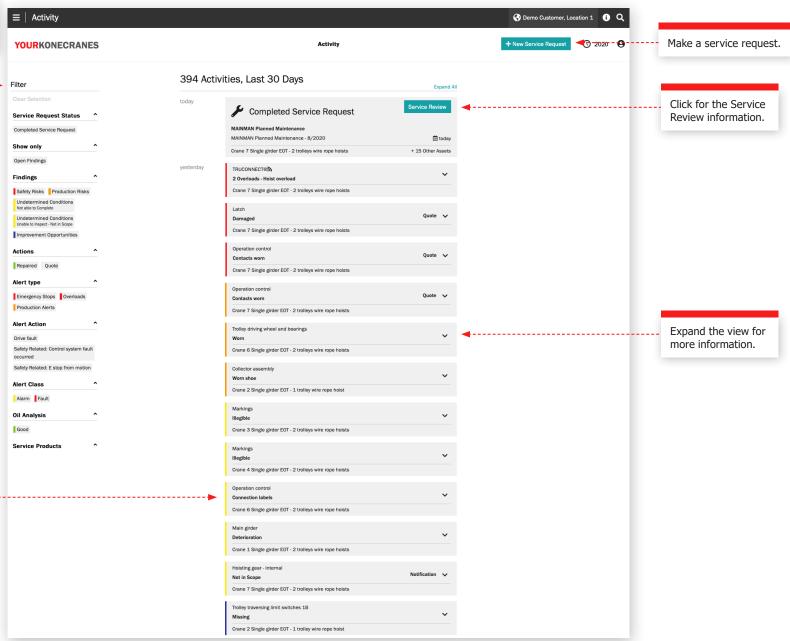
The **Activity** page gives an overview of completed service activities in the selected timeframe as well as TRUCONNECT alerts. Activities can be filtered according to findings, actions, alert type and service products, asset criticality and component.

Filter by any

number of criteria.

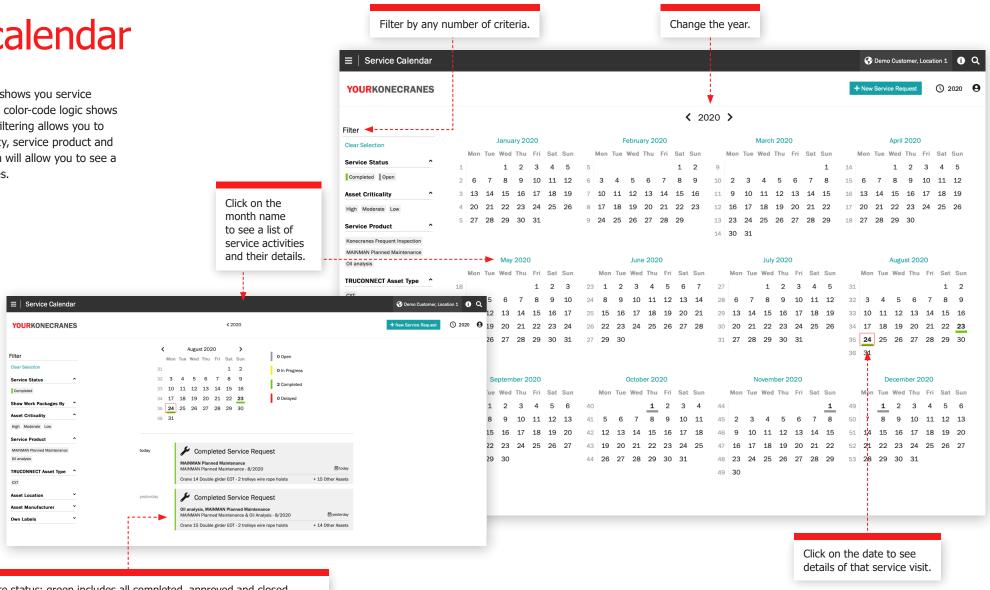
Colors indicate the

type of finding.



Service calendar

The **Service Calendar** page shows you service activities in a calendar view. A color-code logic shows the status of the service and filtering allows you to see activities by asset criticality, service product and task type. Clicking on a month will allow you to see a detailed list of service activities.



Colors indicate status: green includes all completed, approved and closed service requests; yellow is in progress; grey is planned in the future; and red is an open service request where the planned date is five days or more past due.

Go to the Agreement Service Plan view.

Service agreements

Filter by any

number of

criteria.

You can change the year here.

< 2020 >

Agreement Info Agreement Service Plan

The **Service Agreement** section contains the agreement info and the agreement service plan.

In **Agreement Info** you can find the details of your agreement with Konecranes. Contact information, service products and assets under agreement are included here.

In **Agreement Service Plan** you can easily check the past and upcoming services for each asset per year.

Agreement Service Plan

Crane 14

Crane 15

Crane 16

Crane 19

MAINMAN Planned Maintenance

MAINMAN Planned Maintenance

MAINMAN Planned Maintenand

MAINMAN Planned Maintenance

≡ | Service Agreement

YOURKONECRANES

Filter

Service Product

Own Labels

Cleaning of equipment and

Garage Jason KSt. 4711

Pm12 Production line 1

R&D Center Test Testvr

Varierie Werkstatt 1 gggg

Asset Criticality

Service Status

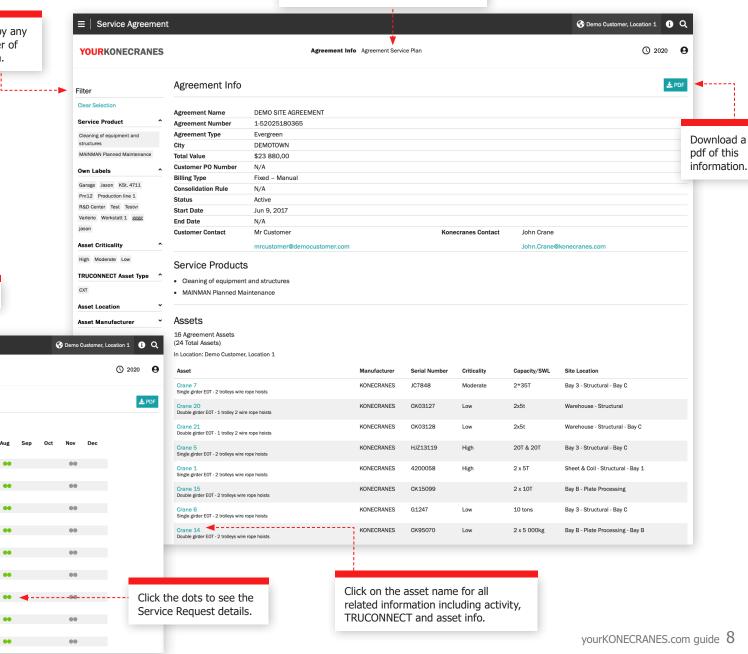
Asset Location

Asset Manufacturer

Completed Open

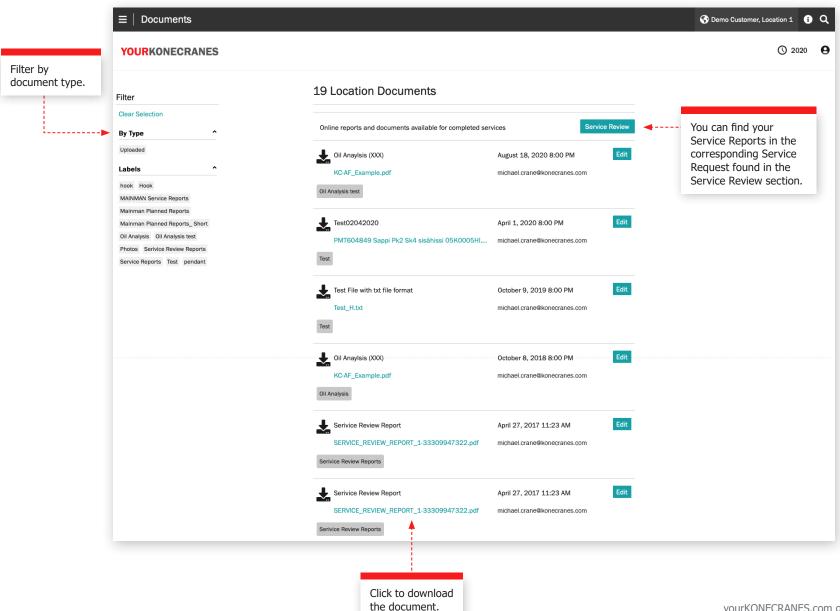
TRUCONNECT Asset Type ^

High Moderate Low



Documents and reports

The **Documents** page shows documents that have been added during the selected timeframe. These include inspection reports and manually uploaded files. Files can be downloaded, and you can also add your own documents. Only legally required documents are automatically available. All online reports are available in the Service Review section.



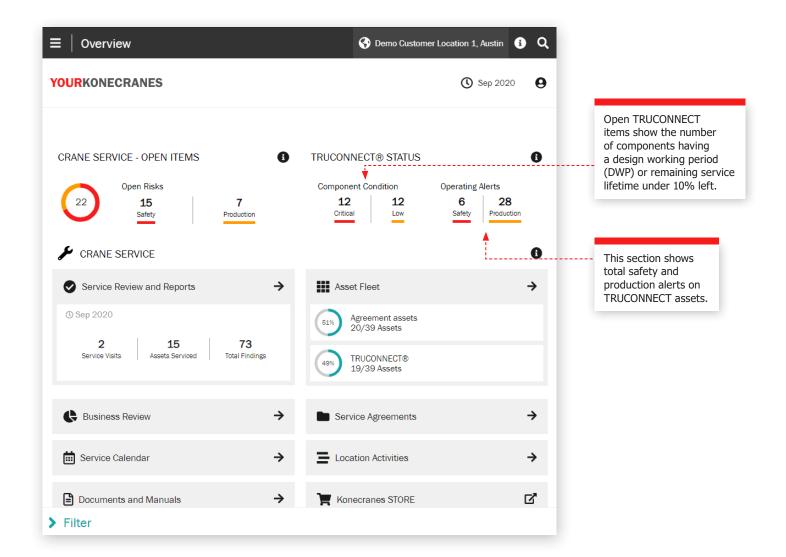
TRUCONNECT Remote Monitoring collects condition, usage and operating data from control systems and sensors on an asset and provides alerts of certain anomalies.

Analyzing and identifying anomalies, patterns and trends in TRUCONNECT data helps you make informed maintenance decisions and prioritize actions.

Collected data varies depending on asset make and model but typically covers condition and expected service life of critical components, running time, lifted loads, motor starts, work cycles and emergency stops. Additional TRUCONNECT options allow certain assets to be equipped with hoisting brake and/or inverter monitoring.

Overview

The Overview section offers a quick glance at open TRUCONNECT items as well as alerts and condition change.



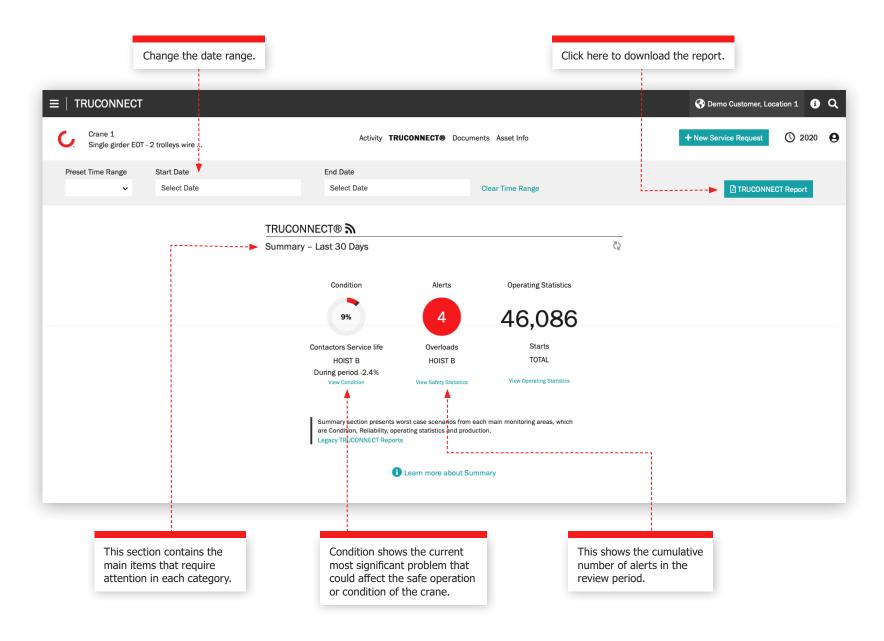
TRUCONNECT page for an asset **Summary**

The Summary section contains the main items that require attention in each category.

The shortest current service life of a component is retrieved from the Condition Monitoring section. Those values will change over time due to differences in the wear rate of components and different crane operating patterns, as these can significantly accelerate the wear rate. The effects of operation are described more closely in the Operating Statistics section.

The cumulative number of alerts in the review period is retrieved from the Alert section. Details are provided in the Pareto analysis of the alerts.

From the Operating Statistics section, the current most significant problem that could affect the safe operation or condition of the crane is added to the summary.



Condition section

Condition monitoring shows the current condition of the components, any risks related to safety and production, and the estimated remaining service life based on the usage history. Condition monitoring can also be used to check the component replacement frequency, which provides a clear indication of upcoming maintenance needs and how changes in the operator's actions affect the service life of components.

This information can be used to plan and schedule preventive maintenance in order to improve safety and reduce unplanned downtime.







Hoist DWP is the calculation of the remaining service life of the hoist and an indication of the remaining fatigue life of the machinery components. When the DWP value approaches zero, the hoist should be overhauled or replaced.

Portion shows the calculated remaining service lifetime of the brake. When the value approaches zero, the entire electromagnetic disc brake should be changed and the shoe brake or thrustor type disc brake inspected.

Portion shows the calculated remaining service lifetime of hoist contactors – up/down direction, fast speed and brake contactors. When the value approaches zero, contactors should be changed. The service lifetime is directly influenced by the usage rate of the hoist and, most significantly, by the use of jogging/inching

Alerts section

Overload

A hoist overload occurs when a lift over the rated capacity is made or attempted. The periodic graph shows the number of overloads. The cumulative graph is the running total to date.

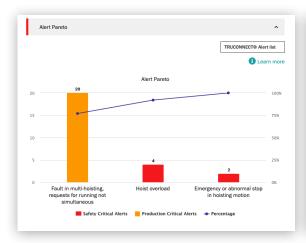
Emergency Stop

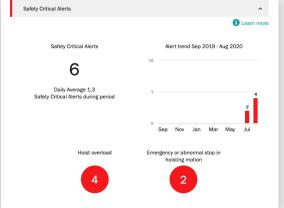
When using a pendant, an emergency stop will register if the operator engages the e-stop button while the hoist is in motion. An e-stop also registers when the hoist is in motion in the up or down direction and the power supply or control is interrupted, when the hoist is operated to the limit switch, or when the pendant battery is low.

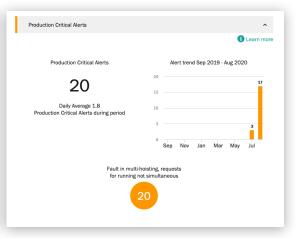
The periodic graph in single asset view shows brake service lifetime in terms of the number of e-stops. The hoist brake wears down 50 times faster with emergency stops than with normal stops.

Motor Over Temperature

A hoist motor over temperature is recorded each time the hoist motor stops operating due to an over temperature condition. The periodic graph shows the number of over temperatures. The cumulative graph is the running total to date.







The Pareto analysis displays and ranks the most important causes of alerts related to the safety and usability of the crane.

These indicate a safety risk to the crane or its operation. Safety-critical risks can include emergency stops, overloading and brake faults.

These indicate production risks that result in crane stoppage or production downtime. Production-critical risks can include motor overheating, inverter faults and control system faults.

Operating Statistics

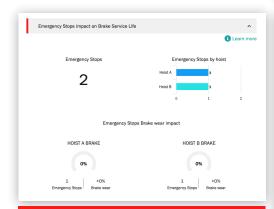
Operating Statistics show how different crane operating patterns affect the safe operation and condition of the crane and the service life of critical components.

Operating patterns can significantly influence the service life and safety of individual components. This section also shows usage rate differences between different hoists and the subsequent differences in their remaining service life.

This section is designed to promote appropriate operation in order to achieve optimal results in terms of the safety, service life and maintenance costs of the crane investment.



This section shows the number of running hours in the review period with a load.



The graph shows the cumulative number of emergency stops per period and the service life trend of the brake.

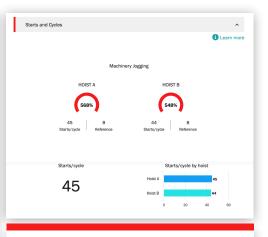


This section shows the production volume of the crane or individual hoist.

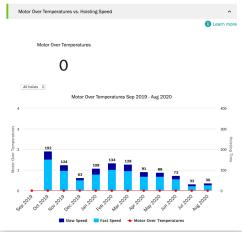
Overloads vs. Hoist Cycles



The load spectrum in the load section shows how close to the rated load the hoist is operated at on average.



Indicates the number of starts with both inverter-controlled and 2-speed motors, and speed changes with 2-speed motors.



The chart shows the ratio of low and high-speed operation of a 2-speed motor and the number of over temperature episodes in the same period.

Service Review

After a service visit, we perform a Service Review to go through open recommendations and quotes, answer questions and plan next steps. There are several ways to see this information on yourKONECRANES - there is a link to Service Review from the main menu, your can find a link on the Overview page and the activity page.

This information on the Service Request page will be discussed during your Service Review to help explain findings, to review open quotations and recommend and plan next steps.

Customer and service information

The details of the service visit including service products, technician name, contact information and dates are listed in this section.

Summary

This section highlights the findings and actions from the service visit. Safety risks, production risks, undetermined conditions, improvement opportunities, repaired items and if available – quotes and declined items – are listed. A graph shows findings and actions by asset and the details of those findings are listed below. Quotes for needed work can be attached here and downloaded.

Filter by any number of criteria. Service Request O Demo Customer, Location 1 (i) Q Download () 2020 **4** YOURKONECRANES or share the Service Report Service Request 1-68252680804-D by email. Filter **Customer and Service Information** Component structure Summary Only findings and actions Service Request Status Short component structure MAINMAN Planned Maintenance Complete component structure Assets Serviced: **Findings and Actions** Findings and Actions View service information Undetermined Conditions including agreement type 15 Safety Risks 7 Quotes and Konecranes contact. 7 Production Risks Comment Acceptable Measurements 7 Undetermined Condition Not able to Complete 9 Improvement Opportunities Show Work Packages By Findings and Actions by Asset (Top 5) Summary of findings **Asset Criticality** and actions for the High Moderate Low completed service Service Product request in easy-to-read MAINMAN Planned Maintenance color-coded format. Asset Name Own Labels Note! The condition of certain components on serviced/inspected cranes cannot be directly verified through visual inspection without further disassembly and/or the use of other inspection methods. These advanced services are excluded from the scope of this service. Inspection frequency for these components should follow OEM recommendations and/or governing regulations. These components are listed separately and identified as follows:

Undetermined Conditions (Unable to Inspect - Not in Scope)

Undetermined Conditions: Unable to Inspect - Not in Scope (16 Assets)

Attachments (2)

Findings and Actions (16 Assets)

i View Descriptions / Learn more

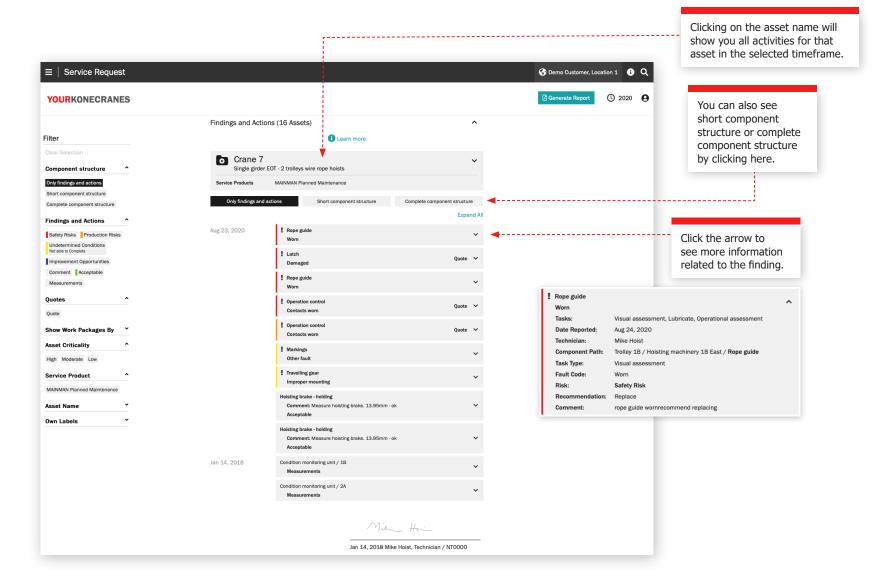
Add/view attachments.

Service Review

Asset details

The assets in the service request are listed in this section. The findings for each asset are listed along with the details such as fault code, risk and a recommendation. You will also find comments from the inspector or technician.

Findings are prioritized with safety and production risks listed first. You can also filter by findings and actions as well as asset criticality, service product and task type.



Service Review

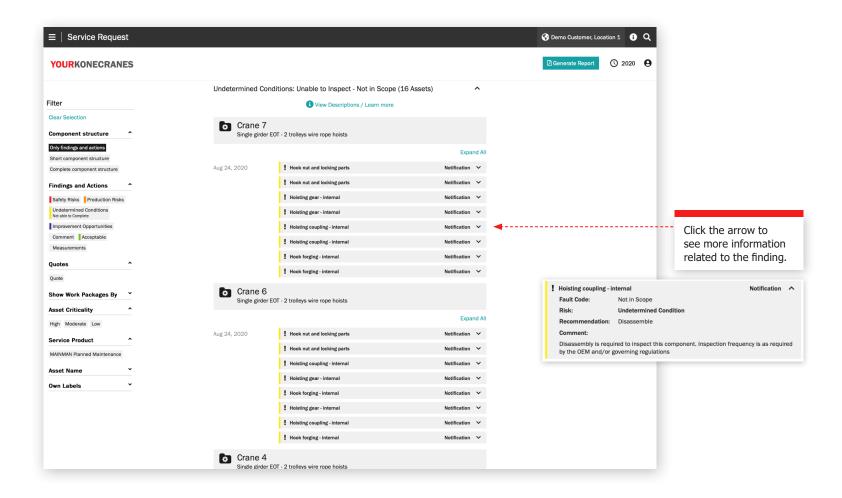
Undetermined Conditions

The Service Request page in yourKONECRANES will list individual components that have an Undetermined Condition and are not in the scope of your agreement.

An Undetermined Condition indicates that the component condition could not be directly verified through visual inspection without further disassembly and/or the use of other inspection methods.

These advanced services are generally excluded from the scope of typical compliance and preventive maintenance inspections. Consultation Services may be added to a Service Program or offered on a stand-alone basis to assess the condition of these components.

You may also see components listed as Undetermined Condition - Not able to Complete. This indicates that the component condition could not be directly verified through visual inspection as a result of asset configuration and/or obstruction. In this case, the visual inspection was part of the service scope but it was not completed.



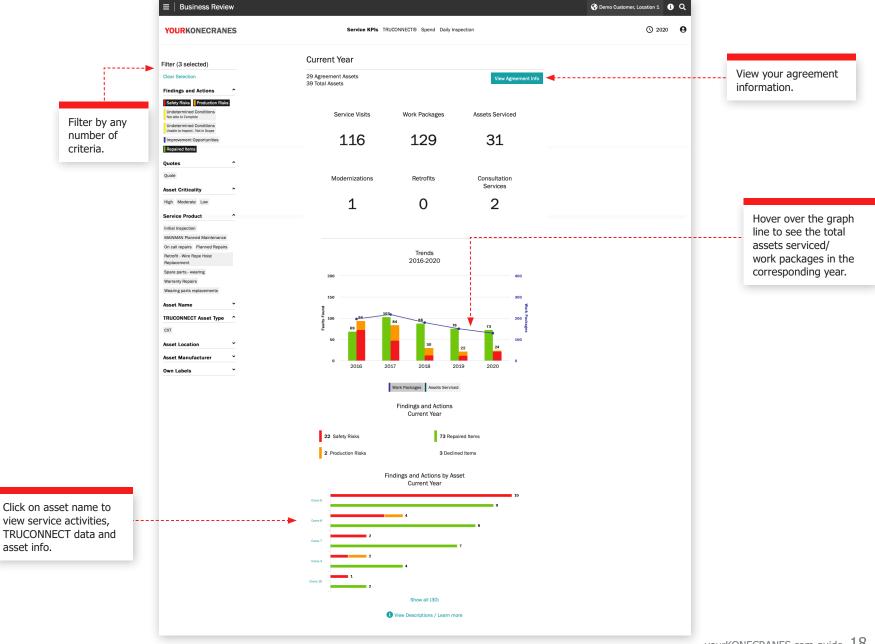
Once a year, or as needed, we like to meet with you at a management level for an in-depth assessment of our service relationship – looking at progress, feedback and documented value. We'll discuss recommendations and plan jointly.

Service KPIs

This section shows the number of service visits, work packages, assets serviced, modernizations, retrofits and consultation services performed during the selected time period.

The Trends graph reveals faults found for work packages and assets serviced. You can view any combination of findings and actions in this graph. Findings and Actions shows the number of safety risks, production risks, undetermined conditions, improvement opportunities and repaired items for the selected time period. Findings and actions are also shown for each asset in the agreement.

asset info.



TRUCONNECT section

This view of your TRUCONNECT information shows the number of alerts and usage by running hours for the selected time period. An alerts summary shows the number of safety alerts in total and by asset. Usage by Running Hours shows the running hours of each asset as well as the number of starts.

The information in this section can help you pinpoint connected assets that need attention and make appropriate plans for budgeting and maintenance.



Hover over the line to see alerts/running hours in the corresponding year.

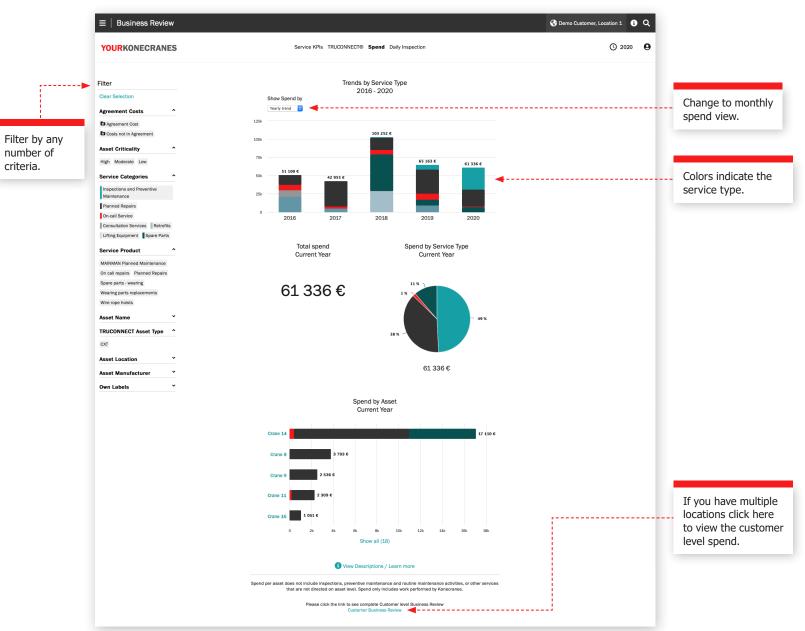
Spend section

Your spend information is summed up in this view. You can look at agreement costs as well as costs not in your agreement. You can also filter by service products.

number of

criteria.

Trends by Service Type show the amount spent on different service products over a five-year period. Total spend and spend by service type is highlighted in an easy-to-read chart and is also broken down by asset allowing you to see, for example, which assets experienced the highest number of on-call service visits.

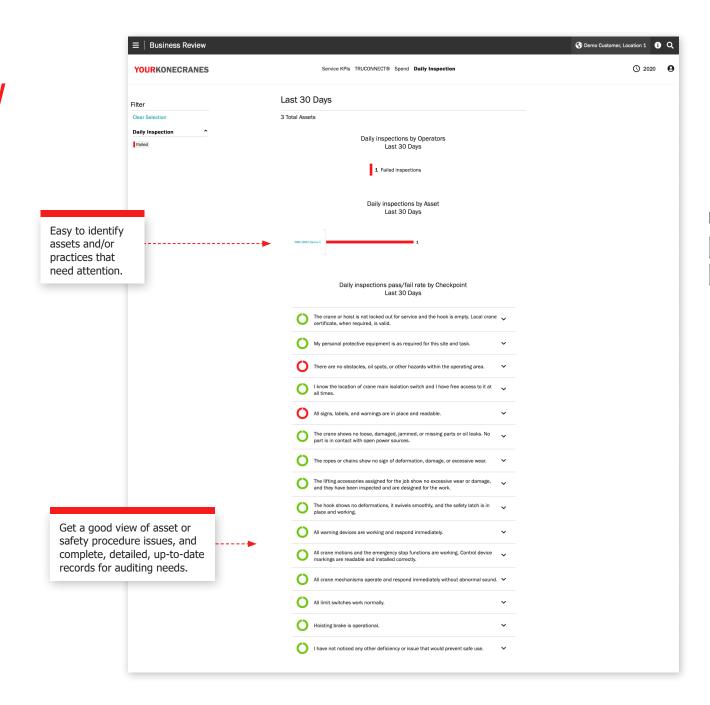


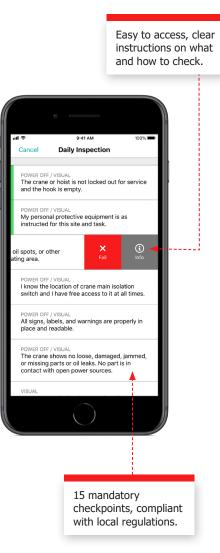
Daily Inspection

Konecranes CheckApp for Daily Inspections has been designed to help crane users quickly and easily record their findings when performing pre-shift and/ or pre-lift inspections. It gives users a digitalized and cost-effective way for recording and retrieving daily inspection data that can be used for internal auditing and compliance. Daily inspections are statutory requirement in several countries.

Daily inspection records are accessible on yourKONECRANES.com, where combined with maintenance history and condition data collected from selected components with TRUCONNECT Remote Monitoring, provides a comprehensive view of the condition of an asset in one easily accessible place.

This data assists in planning maintenance actions and provides an audit trail of performed Daily Inspections. Konecranes CheckApp is an intuitive mobile application which can easily be set up for any or all of your assets under our Service Agreement. The app can be downloaded for free on the Apple App Store or from Google Play for Android devices.







konecranes.com