

HOW WE HELP MAKE IT HAPPEN FOR

INDUSTRIAL INSIGHTS

+ FEATURE

Castrol Complete CMS

Future-proofing your industrial operations.

05-07

+ FEATURE

China Industry X.0

A ground-breaking summit in Shanghai.

16-18

FOREWORD

SUSAN FRAME

GLOBAL MARKETING MANAGER | CASTROL INDUSTRIAL



New normal, new team, new opportunities

Welcome to the fourth issue of Industrial Insights, our e-magazine filled with news, trends, features, and customer success stories.

As industrial companies continue to recover and establish a 'new normal, our focus is firmly on looking forward to helping customers optimize operations and return to full productivity once again. This idea of a fresh start also extends to our team here at Castrol. With new faces comes a renewed vigour to provide even

more value to our industrial customers across the world. With that in mind, this edition introduces new solutions and innovative partnerships. We give some insights into Castrol SmartSensor, our data-driven analytics offering for the wind industry delivered in collaboration with ONYX InSight.

You can also learn about Castrol complete chemical management and services (CMS), a package of solutions to help industrial customers overcome their most common challenges, such as improving efficiency, protecting the environment, and maximizing competitive advantage.

Through Castrol CMS we help our customers future-proof their industrial operations.

As usual, you'll be able to read about our interesting case studies, and learn more about a colleague in Castrol Industrial – in this edition, Phil Booker. Our short animation will also shine a light on the importance of Castrol's advanced lubricants for industrial robots.

In all of these features, our focus remains very much on our customers. How we can continue to be there and support them, develop solutions and products that meet their most critical

needs, and enable them to not just recover but thrive in the months and years to come.

Let's work together to ensure that we continue to look forward with real optimism and positivity.

Please enjoy this issue, and feel free to share any [feedback](#) with us.

“ Let's work together to ensure that we continue to look forward with real optimism and positivity.”

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A ground-breaking summit in Shanghai.



Your industrial success: we help make it happen

Castrol has been collaborating with industrial businesses like yours since 1899. Whatever challenges you are facing, we'll help you identify key decisions you can make that could give you the edge. Together we can help make your business even stronger.

NEWS AND INSIGHTS

Tier one automotive OEM saves an estimated €800,000 per year with Castrol Techniclean 90 XBC

A global automotive OEM has seen significant benefits since changing to Castrol Techniclean 90 XBC. The Techniclean family of water-based cleaners enables precision cleaning of metalworked parts in a wide range of cleaning systems.

While other industrial cleaners can only be discarded, our Techniclean XBC range of cleaners can be cycled back to the coolant system without compromising machining performance.

This reduces waste volume, as Techniclean is constantly being reused. It also enables lower water consumption, and lower operating costs, thanks to the reduction in waste processing and clean water usage.

Tests for the automotive OEM have shown that change intervals can be extended by at least four times the current interval.

The combination of fewer changes, cleaning temperature to save heat energy, and lower consumption and water requirements, means the OEM can save an estimated €800,000 per year with Castrol Techniclean 90 XBC.

Castrol LubeCon for unbeatable performance in elevators and escalators

Castrol LubeCon lubricators are known throughout the manufacturing industry for precise and controlled lubrication of vital chain parts.

Lubricators controlled by Castrol LubeCon's ASC controllers are fully automated to deliver maximum performance which can help extend chain life, reduce down time, and save our customers money.

This industry-leading status has been cemented by the recent award of an "Ellies" statuette, which is given by Elevator World magazine to top suppliers.

From installation and maintenance to fluid analysis monitoring, learn how Castrol LubeCon is the right solution to deliver cost and efficiency benefits to your business.

[**Learn more about LubeCon**](#)

+ FEATURE | CASTROL CMS

CASTROL COMPLETE CHEMICAL MANAGEMENT AND SERVICES

A comprehensive offering that focuses on operational excellence and progressive solutions to future-proof your industrial operations.

+ FEATURE | CASTROL CMS

Manufacturing has been hard hit by the global pandemic, and OEMs are still facing a number of challenges. There is a growing call for greater environmental awareness and cleaner operations, while at the same time manufacturers want to return to the high production levels they enjoyed before the pandemic took control.

The automotive industry is a prime example, as it tries to meet the accelerated demand for electric vehicles (EVs), driven by a combination of consumer demand and incentives from governments for vehicles with lower emissions. At the same time, digital initiatives have been rapidly increased.

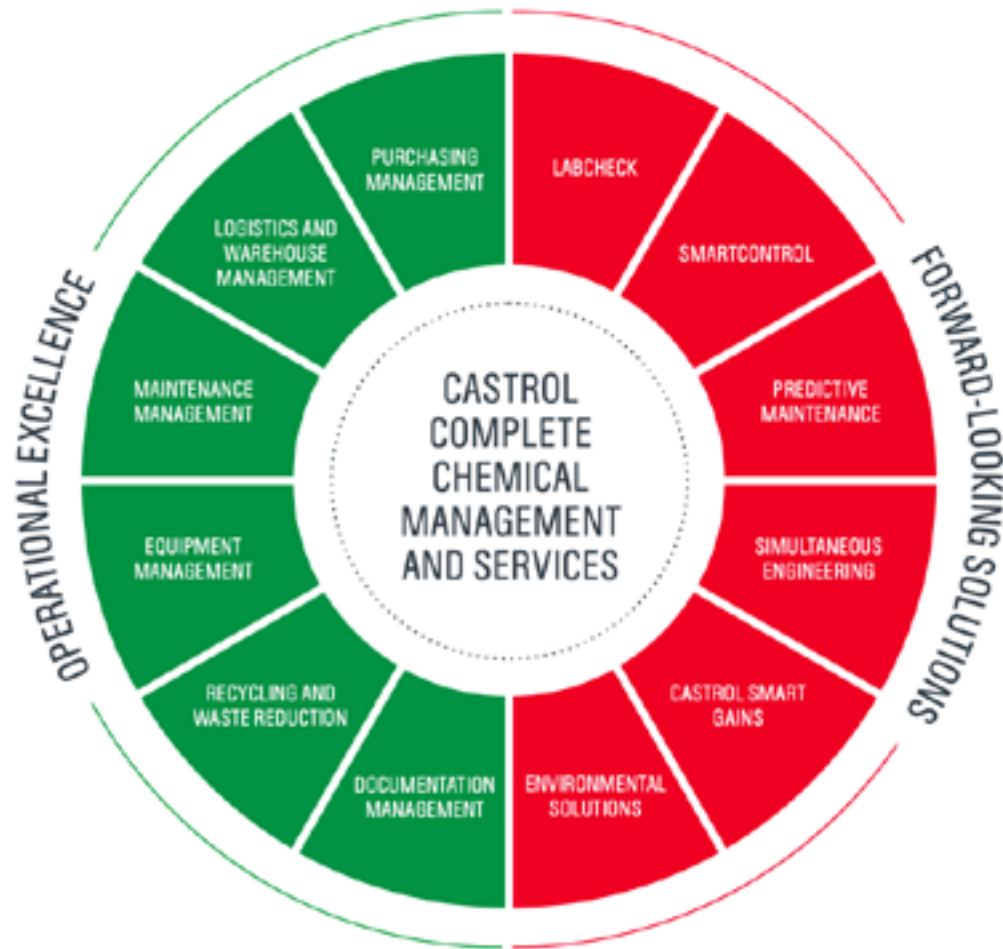
Castrol is committed to working together with manufacturers to help them overcome their main challenges, and build back better in the coming 12 months and beyond.

This is why we have developed Castrol complete chemical management and services (Castrol CMS), which is designed to help manufacturers to:

- + **Maximize competitiveness by reducing costs and improving quality and processes**
- + **Minimize workforce health and safety risks**
- + **Produce more with less resources, in an uncertain era of mobility**



+ FEATURE | CASTROL CMS



Castrol CMS

Castrol complete chemical management and services implements best practices in oil and chemical management to help you minimize costs and maximize operational efficiency. Our experts work with your people, products and processes to manage your lubricants, oils or fluids so you can focus on your core strengths of manufacturing.

This comprehensive offering includes Castrol SmartGains, our process-driven approach towards managing your sites to identify and implement efficiency gains.

We understand that no two operations are identical, so our services are tailored to meet individual plant needs and cover various areas.

[Watch the webinar to learn more](#) or contact us at industrialinsights@castrol.com to discover how Castrol complete chemical management and services can help you to minimize costs and maximize operational efficiency.

+ CASE STUDY | CASTROL AND TELKO

CASTROL AND TELKO'S LASTING PARTNERSHIP ADDS REAL VALUE TO CUSTOMERS

+ CASE STUDY | CASTROL AND TELKO

Telko is a lubricants distributor based in Finland and active in 16 countries. Telko serves a fleet of leading companies across a portfolio that includes:

- + Automotive
- + Food and Beverage
- + Quarry and Mining
- + Wind Turbine applications

Castrol's relationship with Telko dates back over 60 years and the two sides have established a particularly close partnership.

“TELKO IS ONE OF OUR BEST EXPERTS IN HPL PRODUCTS (HIGH-PERFORMANCE LUBRICANTS). WE HAVE A LONG AND WELL-ESTABLISHED RELATIONSHIP WITH TELKO SINCE 1958.”

Ruth Selirand, Distributor Business Manager, Castrol



+ CASE STUDY | CASTROL AND TELKO

“

THE CUSTOMERS TELKO IS WORKING
TOGETHER WITH ARE REALLY LEADING
INDUSTRIAL CUSTOMERS IN OUR MARKET.”

Morten Nedergaard, Director Denmark and Norway division, Telko

Drawing on our vast experience across a range of fields, Castrol has joined Telko's mission to over-deliver in its client relationships, working with the distributor to provide an even better service to its customers — considering both industry trends and the wider environmental impact.

Telko provides information from the field, and Castrol uses it to refine its product range, delivering mutual benefit.

“It's very important that we, as a distributor in the market, collect information and supply it to the Castrol team. That is important for the Castrol team to develop new generations of lubricants. It is really a cooperation between two companies. This pioneering business gave us a lot of knowledge about the capabilities of the product. That knowledge is used in the new products today by Castrol and it is used by us as a distributor to develop new customers.” **Morten Nedergaard, Director Denmark and Norway division, Telko**

[Watch the video](#) to learn more about our mutually beneficial relationship with Telko, and the benefits it delivers to our customers.

+ FEATURE | CASTROL SMARTSENSOR

**CASTROL SMARTSENSOR.
REAL-TIME MAINTENANCE DATA.**

REAL-TIME ADVANTAGES.

Castrol and ONYX InSight have combined to provide real-time condition-based oil and machine health monitoring to minimize downtime and improve LCOE.

+ FEATURE | CASTROL SMARTSENSOR

As the number one supplier of lubricants to the wind industry – as confirmed by the Klein report – Castrol is uniquely placed to meet the industry’s main challenges. This position is strengthened by our affiliate partner, ONYX InSight, an expert in predictive analytics.

We know that the wind industry’s main concerns are to:

- + Lower the levelized cost of energy
- + Reduce downtime, especially with aged assets
- + Fill the skills gap, particularly at a technician level

Together, we combine our experience and expertise with data analysis to create and deliver comprehensive solutions for wind. These data-driven solutions are then continuously tested on an ongoing basis to ensure they deliver the best possible results.



	✓ OIL CONDITION MONITORING	✓ MACHINE CONDITION MONITORING	✓ MACHINE VIBRATION MONITORING
	OIL CONDITION SENSOR	PARTICLE SENSOR	VIBRATION SENSOR
PRIMARY MEASUREMENT TECHNOLOGY:	Relative permittivity (dielectric constant) and conductivity	Magnet and inductive measurement	MEMS accelerometer
DETECTS:	Changes in oil condition or additives	Ferrous debris	Faults in rotating machinery (gears, bearings, imbalance, etc)
INSIGHT:	Oil health	Machine health	Machine health
ADDITIONAL CHANNELS:	Temperature, water (relative humidity)	n/a	Temperature

Castrol SmartSensor utilises data from inline oil condition sensors, particle sensors and vibration sensors. Each of these gives you valuable insights on their own, but together provides an enhanced understanding of your oil and turbine health and the most efficient preventative measures that are needed to be taken to keep them in optimum condition.

The solution is Castrol SmartSensor, utilising data from inline oil condition, particle and

vibration sensors to provide an enhanced understanding of your oil and turbine health.

+ FEATURE | CASTROL SMARTSENSOR

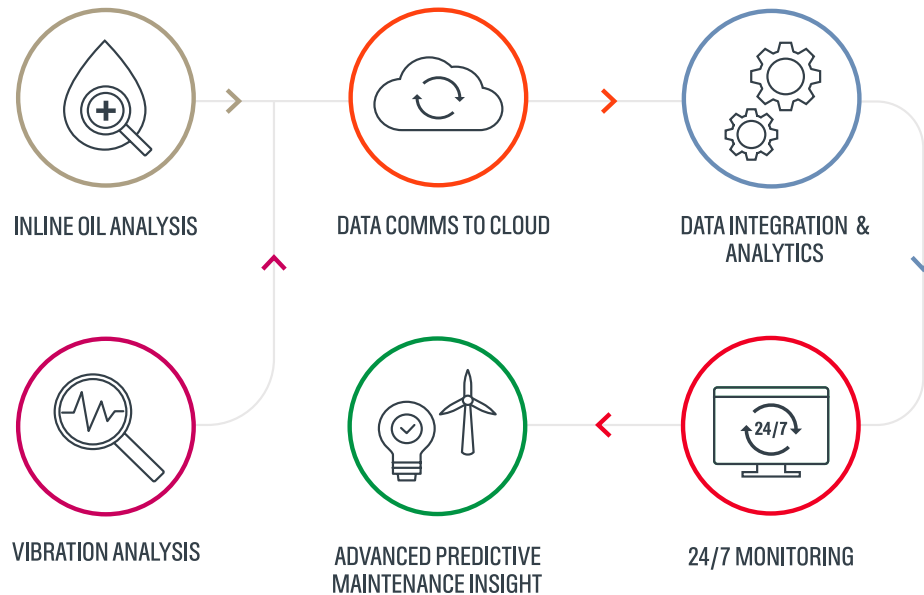
How does it work?

Castrol SmartSensor, powered by ONYX InSight's ecoCMS solution, has been designed to offer 24/7, inline condition monitoring through the latest digital technology, to give your business real-time information and trending analytics about each turbine in your fleet.

Inline oil condition monitoring benefits

In most cases, oil condition monitoring happens infrequently through manual sampling, either during operational downtime or when an asset is already under performing.

Our experience has shown us that these occasional tests are not only inconvenient and time consuming, but they can give us misleading results about the product or incomplete data about other underlying problems.



SmartSensor allows you to monitor oil remotely, and because the sensors are inline, you can still generate energy continuously, without the need to stop production to take readings and without the safety risk associated with climbing the towers and completely eliminating shipping of oil samples to laboratories.

Watch the webinar to learn more or contact us at industrialinsights@castrol.com to discover how Castrol SmartSensor can help you to maximize wind turbine life through real-time condition-based oil and machine health monitoring.

+ FEATURE | **CASTROL'S ADVANCED LUBRICANTS FOR ROBOTICS**

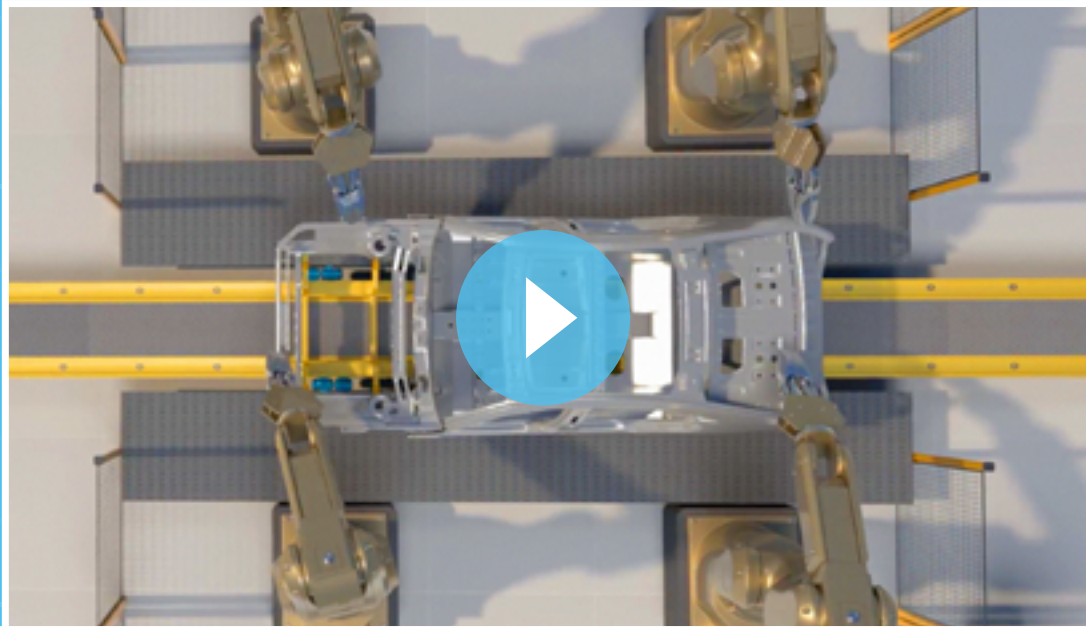
CASTROL'S ADVANCED LUBRICANTS FOR ROBOTS

Watch our short animation to learn more about the potential cost of downtime for robots, and how our advanced lubricants can keep your robots operating optimally.

In our previous edition of Industrial Insights, we revealed the results of our in-depth research into the usage of industrial robots, including how the automotive and electronics sectors are embracing robotics and the challenges of maintaining them for optimal performance.

Take a look at our short animation to learn more about our lubricants, and why NASA chose Castrol for its mission to Mars.

Contact us at industrialinsights@castrol.com to learn more about Castrol's advanced lubricants for robotics.



+ FEATURE | EMPLOYEE SPOTLIGHT

EMPLOYEE SPOTLIGHT



“IT’S ALL ABOUT THE PEOPLE AND COLLABORATION.”



PHIL BOOKER
INTERNATIONAL APPLICATION ENGINEER
CASTROL INDUSTRIAL

This month we’re talking with Phil Booker, who has been part of the Castrol family since 2002. Phil’s team’s motto is “enabling engineering excellence”, and as part of that Phil is responsible for transferring knowledge and building capability in other teams. Watch the video to learn more about his role, the most satisfying part of his job, and why he’d love to see biodegradable lubricants added to our product range.

+ FEATURE | SMART UNION

CASTROL INITIATES

'SMART UNION'

TO ACCELERATE INDUSTRIAL TRANSFORMATION

A collaborative summit across many industries to overcome common challenges and embrace industry X.0.



+ FEATURE | SMART UNION

On 3 November 2020, Castrol joined hands with China Europe International Business School and Accenture to set up China's first 'Smart Union' at a co-hosted summit in Shanghai.

Over 60 leading industry companies and thought leaders gathered at the summit to share ideas and discuss important topics such as digital transformation and intelligent manufacturing. We welcomed leaders and decision

makers from a broad range of sectors, including robotics, automobile manufacturing, wind energy, aviation, machinery manufacturing, and construction machinery.

New opportunities for market recovery

Guest speakers from leading companies, business schools and industrial associations

shared insights through lectures and interactive seminars on how manufacturing industries can:

- + Gain a clear direction to tackle challenges and optimize opportunities**
- + Complete transformation and upgrading initiatives**
- + Embrace future development**

The summit celebrated the founding of China's first Smart

Union, a collaboration between key players in the industry in response to the wave of intelligent manufacturing. With the power of all parties involved, the union will continue to promote the intelligent development of the industry, helping manufacturers to be fully prepared for the upcoming era of industrial X.0 and stand out in the wave of digital transformation.



+ FEATURE | SMART UNION

"I'm very interested in Castrol's Smart Control solution, which will largely help to save energy/cost and increase efficiency. I'm keen to get it applied in our daily operation."

Mo Yue, Chief Innovation Director, Mazak

"In the future, Castrol will take the lead and help the Union members to communicate and cooperate more closely. We are going to bring in the smartest

minds from each of the segments. That makes the whole industry move forward together in a more sustainable and efficient way, and we can accelerate the intelligent development of the industry."

Mike Zhang, Global Vice President and President Castrol China

There has already been an incredible reaction to the Smart Union and Castrol's Industry X.0 campaign.

+ The China Club Golden Craftsman CMO Awards, which recognizes the region's outstanding marketing initiatives, gave Castrol's Industry X.0 a Bronze Award as one of the best B2B integrated marketing communication campaigns.

+ Tencent awarded Castrol Industry X.0 as the best effective business driver for growth and advocacy for the B2B market.

+ Castrol was the only lubricants supplier to be given an award by 1st TIME, the professional marketing awards.

Contact us at industrialinsights@castrol.com to learn more about China's Smart Union and Castrol's involvement in industry X.0.



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CASTROL ON MARS

The background of the advertisement is a photograph of the Martian surface. In the foreground, a Mars rover is positioned on the right side, facing left. Above it, a small helicopter is in flight. The horizon is visible in the distance under a hazy, orange-tinted sky, suggesting a sunset or sunrise on Mars. The large, bold text "CASTROL ON MARS" is superimposed over the center of the image.

CHOOSE LIQUID ENGINEERING CHOSEN BY NASA
CASTROL.COM/ONMARS

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IT'S MORE THAN JUST OIL. IT'S LIQUID ENGINEERING.



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CHOOSE LIQUID ENGINEERING CHOSEN BY NASA
CASTROL.COM/ONMARS

THE SAME INNOVATION THAT HELPS NASA EXPLORE SPACE
CAN BE FOUND IN EVERYTHING WE DO ON EARTH.

IT'S MORE THAN JUST OIL. IT'S LIQUID ENGINEERING. 