

Shell Marine



TECHNICAL SERVICE SOLUTIONS

Integrated programmes optimised to meet your needs



GROWING COMPLEXITY AND EXPENSE?

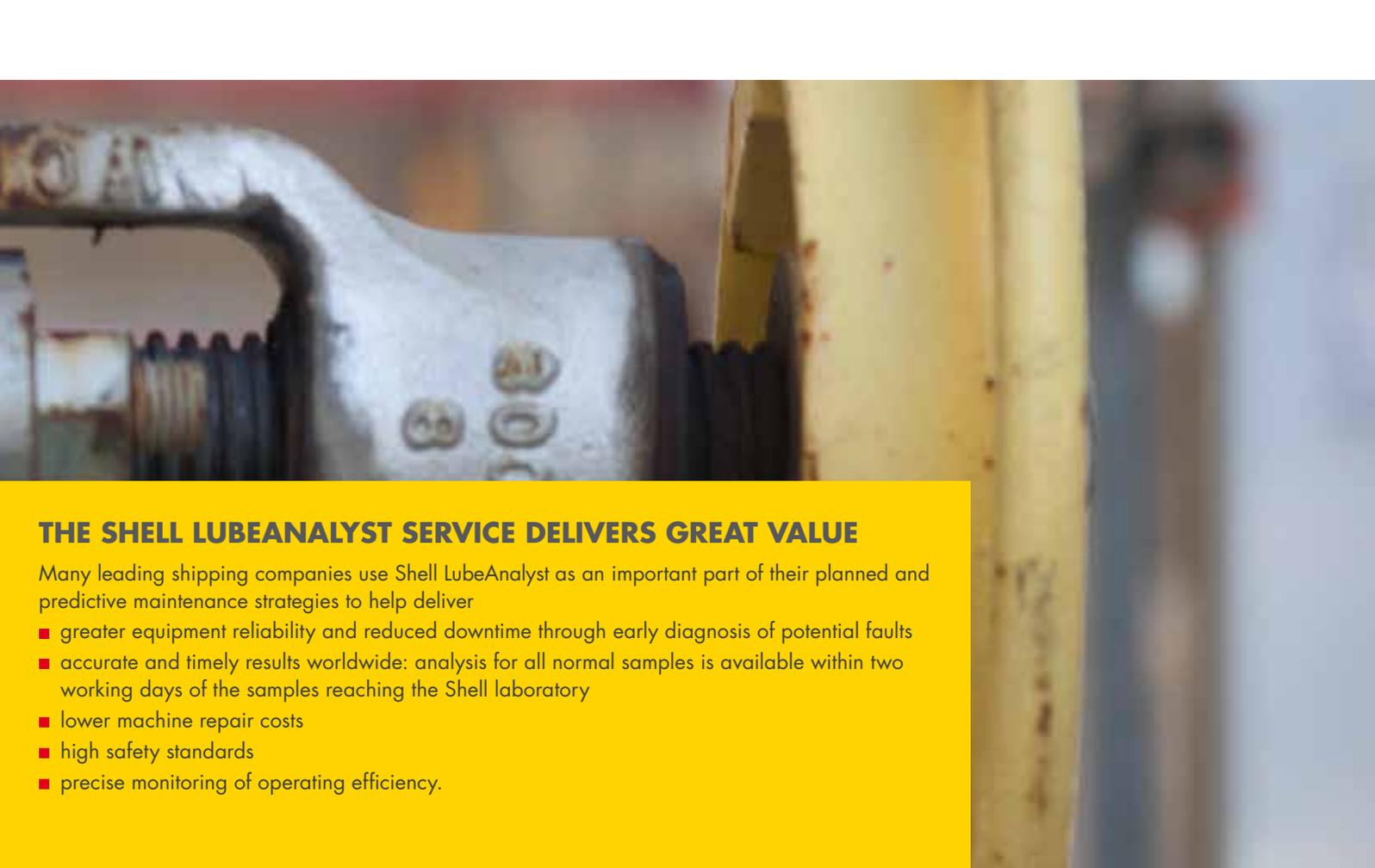
Are new regulations, engine technologies and diverse fuels threatening to add complexity and expense to your operations? We understand the fundamental need of ship operators and owners to control costs. Consequently, we have developed a suite of technical services optimised to meet your needs and designed to help reduce your operating costs.

THREE LEVELS OF TECHNICAL SERVICES

To meet your distinct needs, we offer three levels of tailored services:

- Standard – for customers who need essential services such as Shell LubeAnalyst cost-effective oil and equipment condition monitoring
- Plus – for customers who want to add value with services such as Shell LubeMonitor that can help to optimise cylinder oil feed rates
- Pro – for customers who demand special care for critical equipment, for example, through Shell LubeExpert engine inspections.





THE SHELL LUBEANALYST SERVICE DELIVERS GREAT VALUE

Many leading shipping companies use Shell LubeAnalyst as an important part of their planned and predictive maintenance strategies to help deliver

- greater equipment reliability and reduced downtime through early diagnosis of potential faults
- accurate and timely results worldwide: analysis for all normal samples is available within two working days of the samples reaching the Shell laboratory
- lower machine repair costs
- high safety standards
- precise monitoring of operating efficiency.



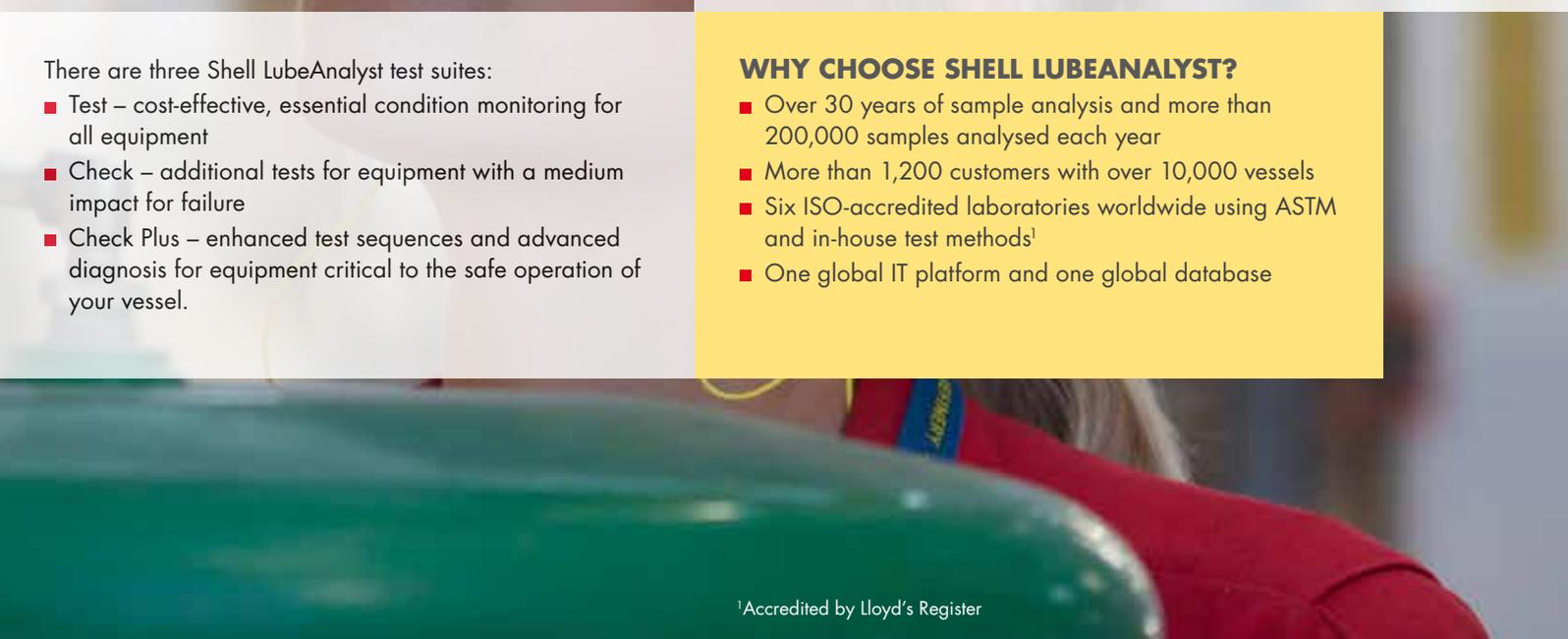
USED OIL AND EQUIPMENT MONITORING

Shell LubeAnalyst is an oil condition monitoring service that helps to ensure that your equipment and lubricants are in optimum working order by identifying potential oil or equipment failures before they become critical. This service is designed to help save money and time on maintenance.

- Our service covers every type of vessel machinery.
- Your samples are analysed by a multidisciplinary team of marine and lubricant experts when you opt for the Plus or Pro service.
- We provide local-language reports and web systems.

There are three Shell LubeAnalyst test suites:

- Test – cost-effective, essential condition monitoring for all equipment
- Check – additional tests for equipment with a medium impact for failure
- Check Plus – enhanced test sequences and advanced diagnosis for equipment critical to the safe operation of your vessel.



WHY CHOOSE SHELL LUBEANALYST?

- Over 30 years of sample analysis and more than 200,000 samples analysed each year
- More than 1,200 customers with over 10,000 vessels
- Six ISO-accredited laboratories worldwide using ASTM and in-house test methods¹
- One global IT platform and one global database

¹Accredited by Lloyd's Register



Shell LubeMonitor 2T

This programme includes

- sweep tests, which equipment manufacturers require for finding the optimal feed rate when changing, for example, fuel (different sulphur level) or load. This test is especially advisable for engines suffering from cold corrosion problems.
- feed rate optimisation, which helps to save you money on cylinder oil by finding the lowest possible feed rate and optimum wear rate combination for an engine
- cylinder monitoring, which helps you to understand the condition of an engine and is particularly useful for engines suffering from cold corrosion. Equipment manufacturers are advising customers to take part in cylinder monitoring when they are operating a latest-design engine. The programme can also help you to understand the root causes of high wear issues.

**SHELL LUBEANALYST HELPS TO
REDUCE OIL FEED RATES BY 25%.²**

CYLINDER CONDITION MONITORING

The Shell LubeMonitor service is designed to monitor two- and four-stroke marine engine performance. It includes access to Shell tools and advice to help you strike and maintain an acceptable balance between oil costs and maintenance expenses.

Shell LubeMonitor 4T

This service (only applicable to engines using Shell Argina) includes tailored medium-speed-engine oil-stress-management advice. As part of the service, we quantify the financial benefits from implementing improvements.

The combination of Shell Argina engine oil and the Shell LubeMonitor 4T service can help to

- increase engine protection and reliability
- optimise operating costs over an engine's life
- provide longer oil life
- provide longer engine component life.

²Recorded in documented savings and approved by the customer

SELECT FROM OUR MENU

We provide flexibility and choice so that you get the technical services you need to optimise your operations.

	Standard (essential)	Plus (optimising)	Pro (special)
Shell LubeAnalyst Used oil and equipment monitoring service ³	"Test" range of suites	"Check" range of suites <ul style="list-style-type: none"> ■ Additional information from used oil samples 	"Check Plus" range of suites <ul style="list-style-type: none"> ■ Enhanced test sequences ■ Advanced diagnostics
Shell LubeMonitor Cylinder condition monitoring service	<ul style="list-style-type: none"> ■ Good cylinder running condition ■ Efficient operation ■ Acceptable wear rates 	<ul style="list-style-type: none"> ■ Identifying the lowest lubricant consumption for a particular engine for an optimum balance between engine protection and lubricant cost ■ Onboard test tools ■ Marine Connect software 	<ul style="list-style-type: none"> ■ Shell managed ■ May include engine inspections
	<ul style="list-style-type: none"> ■ Customer managed 		
Shell LubeAdvisor General technical support and product recommendations	<ul style="list-style-type: none"> ■ Lubricants listed as per industry norm 	<ul style="list-style-type: none"> ■ Optimised lubricant chart with equipment manufacturers' recommendations ■ Technical support services 	
Shell LubeCoach Training and up-skilling service		<ul style="list-style-type: none"> ■ Training programmes that help to realise the benefits of a fully optimised lubrication plan 	
Shell LubeExpert Specialist consulting, troubleshooting and research and development service		<ul style="list-style-type: none"> ■ Ship visits 	<ul style="list-style-type: none"> ■ Engine inspections ■ Field trials

³Formerly known as Shell Rapid Lubricants Analysis



ADVICE, COACHING AND EXPERTISE

Shell LubeAdvisor provides a global team of field-based engineers for on-site support, including lubrication surveys, vessel assessments and in-depth technical and application support. This support is also available by phone and email.

Shell LubeCoach is a customised training programme designed to give your employees the knowledge they need to make informed decisions that result in longer lubricant and component life. Experts with substantial seagoing experience deliver this programme. The workshop-based training provides practical insight into best practices distilled from the Shell global network.

Shell LubeCoach topics commonly include

- storage and handling
- health and safety
- marine application of lubricants
- Shell LubeAnalyst
- cylinder drain oil monitoring
- environmentally acceptable lubricants.

Shell LubeExpert is our specialist consulting, troubleshooting and research and development service. Our customer-facing professionals can work with you on critical applications and challenging lubrication problems to ensure your equipment runs smoothly. These passionate experts have sector- and application-specific knowledge that can help to deliver competitive advantage to your business.

Services provided through Shell LubeExpert include

- application specialist support on marine engines and other vessel equipment
- engine testing for external parties
- technical consultancy and problem solving.

FIND OUT MORE

For more information on our technical services or products, please contact your Shell Marine representative or visit

www.shell.com/marine.

THROUGH THE SHELL LUBEADVISOR SERVICE, WE AIM TO ENSURE THAT YOU GET THE RIGHT LUBRICANT RECOMMENDATION FOR THE RIGHT EQUIPMENT, EVERY TIME.

