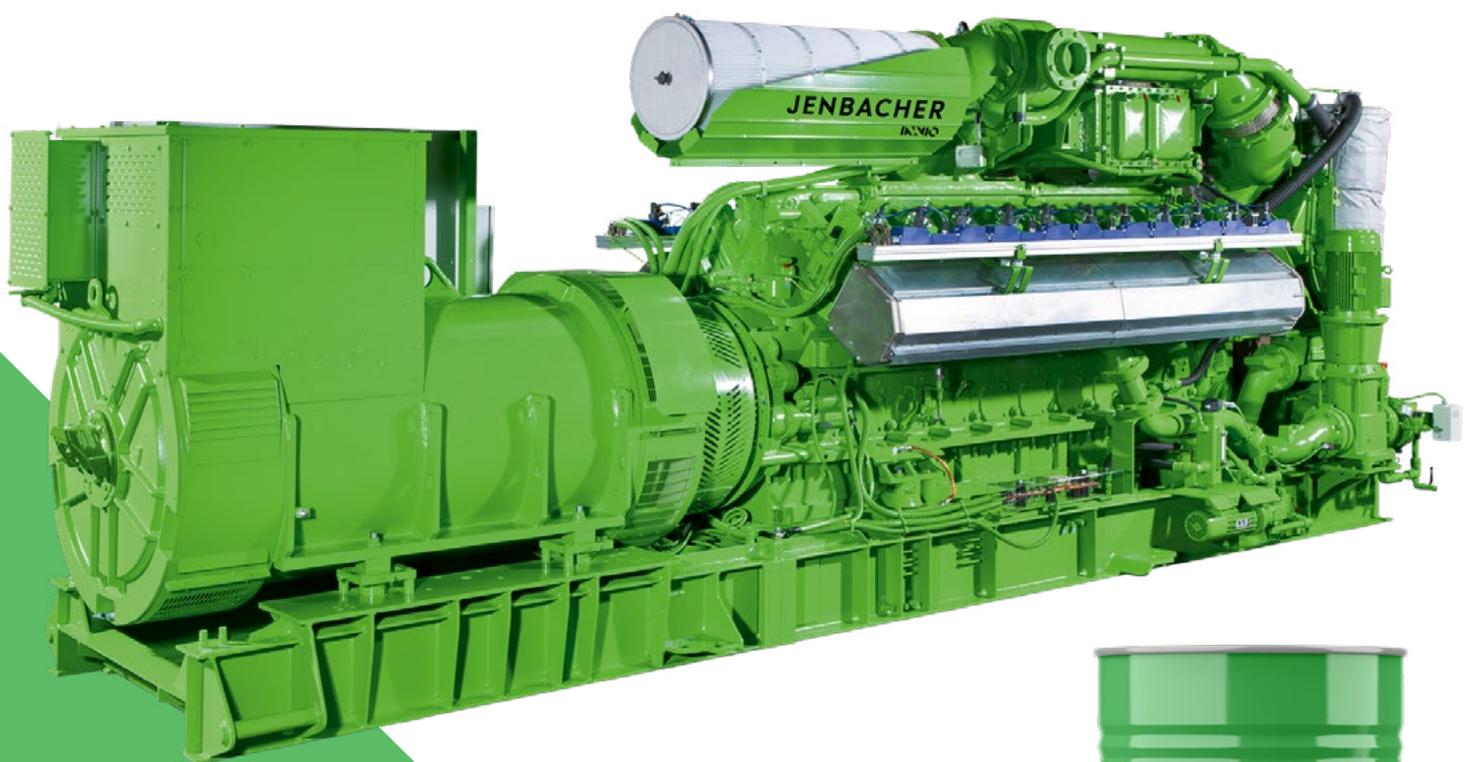


JENBACHER

Q8  Oils

Jenbacher S Oil 40

DEVELOPED FOR NON-NATURAL GAS ENGINE APPLICATIONS





Q8Oils is a subsidiary of Kuwait Petroleum Corporation (KPC), which is ranked as **one of the world's top ten energy conglomerates**. Q8Oils' products, services and solutions are designed to increase the profitability and sustainability of our customers' businesses.

Q8Oils develops, blends and delivers a comprehensive portfolio of **more than 1,000 technology-enhanced lubricants** to suit every application, from the smallest engine to the largest machine. Based on extensive R&D activities in Q8Oils' European laboratories, we manufacture an extensive range of oils in our own blending plants in Antwerp, Belgium and Castellar Guidobono, Italy.

Our strong focus on the development of gas engine oil solutions results in state-of-the-art products. In comparison with industry standards, Q8Oils has chosen to select additive components itself for its **custom-made gas engine oils**. These products, **developed entirely in-house**, differentiate ourselves in terms of technical and operational benefits. Q8Oils' lubricating solutions not only result in cleaner engines, they also limit downtime, reduce maintenance costs and extend engine drain intervals, which result in **increased efficiency and lower operational costs for stationary gas engine users**.

www.Q8Oils.com



We are delighted to partner with world-class engine producer INNIO, bringing together Q8Oils' leading technology in gas engine lubrication and INNIO's world-leading expertise in designing and building gas engines.

Frank Rouwens, General Manager Q8Oils

This partnership will be a key driver to continue to improve the performance of our non-natural gas engines in an environmentally friendly way.

Andreas Kunz, Chief Technology Officer, INNIO”

JENBACHER

INNIO is a **leading solutions provider of gas engines**, power equipment, a digital platform and related services for power generation and gas compression at or near the point of use. With the Jenbacher and Waukesha product brands, INNIO pushes beyond the possible and looks boldly toward tomorrow.

INNIO's **diverse portfolio of reliable, economical and sustainable industrial gas engines** generates 200 kW to 10 MW of power for numerous industries globally. INNIO provides life cycle support to more than 50,000 delivered gas engines worldwide. Backed by a service network in more than 100 countries, INNIO connects with customers locally for rapid response to your service needs.

Headquartered in Jenbach, Austria, the business also has primary operations in Welland, Ontario, Canada, and Waukesha, Wisconsin, US.

www.innio.com

Q8Oils and INNIO

A STRATEGIC PARTNERSHIP

Q8Oils and INNIO are combining strengths in a long-term partnership agreement for the global supply of lubricants for Jenbacher gas engines that operate on non-natural gas, including sewage gas, biogas and landfill gas.

The Q8Oils/INNIO partnership will increase knowledge sharing and facilitate faster and more innovative development in future. It continues our successful existing technology partnership of more than 20 years and will enable us to improve further the durability and efficiency of Jenbacher type 2, 3, 4 and 6 engines running on non-natural gas.

Jenbacher S Oil 40

KEY FEATURES



Lower operational costs



Longer engine life



High TBN retention



Excellent protection and anti-wear properties



Exceptional condemning limits

JENBACHER S OIL 40

Jenbacher S Oil 40

The high performance Jenbacher gas engine oil for non-natural gas

Jenbacher S Oil 40 is a high-performing synthetic (hydrocracked) oil for stationary gas engines. This medium-ash product is specifically developed for engines running under severe conditions in non-natural gas applications (biogas, sewage, landfill, woodgas, etc.).

Jenbacher S Oil 40 provides an increased drain interval (by on average 80% longer). The special used oil limits for this product provide a reliable operation with an extended oil drain, reducing life cycle costs significantly.

APPLICATIONS

Jenbacher S Oil 40 can be used for all series of Jenbacher engines Type 2, Type 3, Type 4 and Type 6, operating on various types of non-natural gases.

FEATURES

Engine protection

High-performing stationary gas engine oil with an excellent oxidation stability and first-rate acid neutralization abilities. Exceptional performance in operations with high H₂S content gases.

Enhanced Technology

The superior additive technology protects the combustion chamber from excessive deposit formation and provides an outstanding TBN-retention.

Extended drain

The latest additive technologies and premium hydrocracked base fluids provide maximal protection and engine cleanliness. This results in an extended drain interval and a significant reduction of the total operational costs.

BENEFITS

APPROVALS

Jenbacher S Oil 40 is approved for the whole range of Jenbacher non-natural gas engines Type 2, Type 3, Type 4 and Type 6. Jenbacher S Oil 40 is approved for extended used oil limits following the Technical Instruction TA 1000-0099B (Limit levels for used oil in INNIO Jenbacher gas engines).

For the latest approvals, check INNIO Jenbacher's technical instructions TA 1000-1109, which can also be found on www.innio.com.



PROPERTIES

	Method	Unit	Typical
Density, 15° C	D 4052	g/ml	0.862
Viscosity grade	-	-	SAE 40
Kinematic Viscosity, 40° C	D 445	mm ² /s	90.0
Kinematic Viscosity, 100° C	D 445	mm ² /s	13.4
Viscosity Index	D 2270	-	150
Total Base Number	D 2896	mg KOH/g	8.0
Pour Point	D 97	°C	-18
Flash Point, COC	D 92	°C	258
Sulfated Ash	D 874	% mass	0.79
Copper Strip, 3h, 100° C	D 130	-	1

The figures above are not a specification. They are typical figures obtained within production tolerances.

SUPERIOR

TECHNOLOGY

1

CUSTOM DEVELOPMENT

We rely on our own formulations for tailored solutions, which are developed in-house by our Research and Technology centres.

Jenbacher S Oil 40 was developed with a single objective: to reduce costs and optimise production.

2

APPLICATION KNOWLEDGE

As global players with high-performance products and excellent support services, we offer our customers peace of mind. Our dedicated resources set us apart in the industry and allow us to focus on finding a solution for every customer application.

We take pride in being able to tackle any challenge, no matter how extreme the operating conditions.

Jenbacher S Oil 40 is built to perform in the most extreme operations conditions.



3 LOWER OPERATIONAL COSTS

- ✓ Exceptional stability and TBN retention
- ✓ Extensive alert limits for oil monitoring by Q8 Routine Analysis Service (QRAS)
- ✓ High dispersion properties to keep engine components clean and reduce deposits
- ✓ Better resistance to oxidation
- ✓ Excellent protection to reduce valve head recession

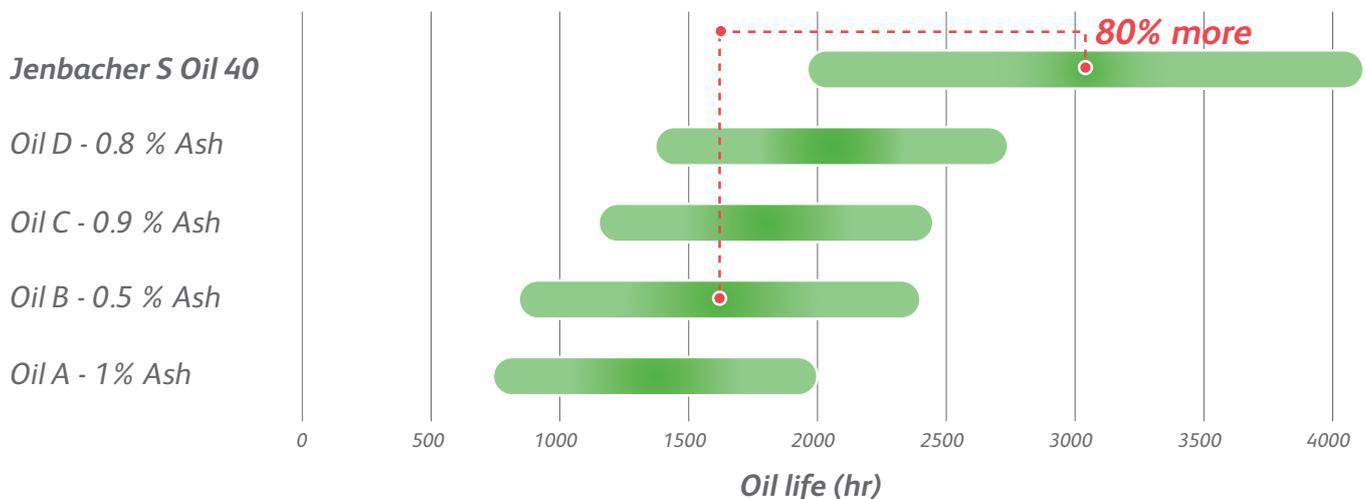
4 ENHANCED ENGINE PERFORMANCE

Using the correct lubricant is crucial to maximise the performance and productivity of your gas engine.

Tests show that thanks to its superior qualities, Jenbacher S Oil 40 can increase drain intervals by on average 80% and filter life up to 100%.

Oil life in INNIO Jenbacher J320 engine running on Non Natural Gas ⁽¹⁾

Based on > 9.000 condition monitoring samples.



(1) The displayed results are based on the experience of a limited number of engines during field tests. Actual results can vary depending on the type of engine, its maintenance, operating conditions and quality of prior lubricant used. Please consult the technical instructions from INNIO Jenbacher for specific guidelines.

SERVICE-DRIVEN ORGANISATIONS

Jenbacher gas engines and Q8Oils' gas engine oils are used in demanding conditions and first-rate support is needed to ensure that operations are constantly safe and efficient. As well as delivering superior products, Q8Oils and INNIO place the highest emphasis on delivering excellent service.

Our common goal is to get the most out of our customers' applications by providing products and service of the highest quality.

QRAS Q8 Routine Analysis Service

QRAS offers fast and reliable monitoring of the condition of your engine oil. We have extended our system limits to match the longevity of Jenbacher S Oil 40.

- ✓ Regular oil analysis determines the required oil drain intervals and prevents damage to gas engines
- ✓ We deliver fast and reliable results by e-mail, or you can access your data online

PALub

Product Applications LUBricants is Q8Oils' technical service. Our enthusiastic team of experts are passionate about the industry, and are there to help and guide you.

Our PALUB team works closely with specialists in Europe and beyond, and speak in English, French, Dutch, German, Italian, Spanish, Bulgarian, Russian and Arabic.

Boroscopy

Good knowledge of an engine's condition is essential to prevent a wrong diagnosis. Our trained professionals interpret the findings of a borescope inspection.

We offer our customers a boroscopy service that meets and exceeds your needs.

Training

A thorough understanding of the lubrication needs of your gas engine is essential for efficient operation.

We offer a range of training seminars, each run by an experienced Q8Oils technical specialist, to help you work safely and efficiently. Training can be tailored to your individual needs and delivered on site.



Having used Q8Oils' products in a fleet of landfill generating units for a number of years now, **I can honestly say that the oil has always delivered on minimising engine wear whilst maximising oil life.**

Ordering and delivery are always easy to arrange and prompt to site. Customer service is on hand whenever called upon to discuss available products and recommendations for application. Highly recommended.

Tony Owen, YLEM Energy, UK

Things did not happen by chance, but followed a long process of researching the supplier and its products. Experimental tests in the operating situation have made it possible to check the performance of Q8 lubricants, whether it concerns the longevity of the oil charge, the reduction in the specific consumption, or the maintenance of the wear parts or engine cleanliness.

We appreciate the daily investment of Q8Oils at our site, their qualitative advice, proposals and optimisations, and their ability to invest continuously in the search for innovative products meeting the latest requirements of the Jenbacher gas engines that we supply.

The proposed range is very relevant, it now offers third generation synthetic products with unprecedented feedbacks.

Didier Lartigue, Managing Director Clarke Energy, France

We have been using Q8Oils' products for the past two years in our Jenbacher gas engines. Q8Oils' gas engine oils perform exceptionally well, and the technical support we received is extraordinarily uncommon. We recently did a study on oil consumption, and compared it to the product we were using prior to Q8Oils. Their technical team used our empirical data to do the study, and we found that the Q8Oils product was consuming 40% to 45% less oil in our engines.

I would recommend the product to anyone that is looking for performance driven, and reliable product, with exceptional technical support from passionate experts!

IMG Midstream, USA

We converted our Jenbacher J616 engines to Q8Oils for our landfill operations some years ago. Q8Oils gas engine oil's performance has by far exceeded our expectation. We have witnessed an increase in oil drain intervals from 2,000 to well over 5,000 hours at most sites with no increase in oil consumption. We were so pleased with the performance of the product that we have also started converting our engines to Q8Oils as well. Their technical support and customer service is also second to none.

If you want a reliable product with great service, I strongly recommend Q8Oils.

Ryan Hennessy, Maintenance Manager at Cubed Energy, USA



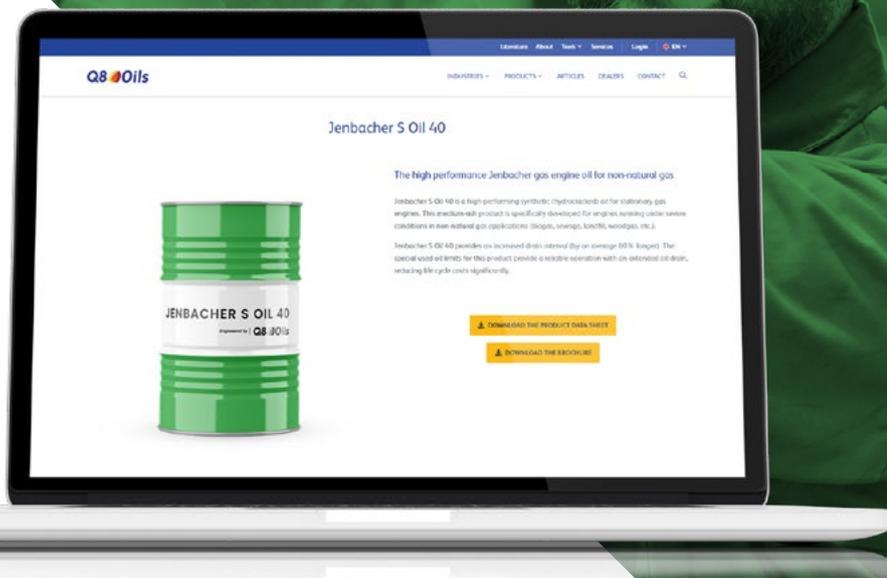
Q8OILS' CUSTOMERS TESTIFY

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for all your questions about Jenbacher S Oil 40

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