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acquire Chevron  
SA assets **P.7**



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**Exxon Mobil-Yoshi launch  
new fuel delivery service **P.15****

# Lubezine®

Focusing on Africa's lubrication needs

VOL. 24 | MARCH 2018 | WWW.LUBEZINE.COM

MAIN FEATURE

## Regulating the Kenyan LUBRICANTS INDUSTRY



**PLUS: TAIYE O. WILLIAMS: KEEPING LUBCON AFLOAT IN NIGERIA'S MARKET **P.24****



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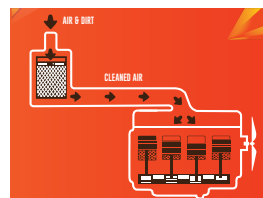
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## STANDARDS

# Standardization and regulation of the lubricant industry



**James Wakiru**

**Lubezine Magazine**  
Editor-in-Chief

**R**egulation of the lubricant industry is a much-needed practice the world over. Every country now requires that finished products and raw materials exiting or entering a given country meet at the very least a set of minimum quality standards.

It is the setting, implementation and enforcement of such standards that sanity can be brought to markets that are under constant threat of counterfeit or substandard lubricants.

In Our Cover story we highlight the steps taken by Kenya bureau of standard (KEBS) and other industry stakeholders to regulate the lubricants market in Kenya. This organisation is mandated to set the minimum standard of lubricants that are permitted to be sold in Kenya.

This task is undertaken in close consultation with industry players through the so called technical committees. Once the set of rules have been agreed upon and gazetted, every imported or locally

produced lubricants must adhere to these standards.

Without bodies such as KEBS, the industry in Africa would be suffering immensely from unscrupulous traders who might want to take advantage of consumer ignorance regarding lubricants quality.

Similar regulatory activities carried out by The Energy and Water Utilities Regulatory Authority (EWURA) in Tanzania, equivalent to KEBS are also highlighted in our market report.

With its headquarters in Ilorin, Nigeria, Lubcon International has risen steadily to be a player of reckon in Nigeria, a country that is one of the largest in Africa with close to 52 lubricant blenders. We spoke to the company's MD, Mr. William Taiye in our 10-questions for lubricants professional who took us through the challenges and factors required to succeed in this market.

We are excited to introduce LUBE POST our monthly newsletter that will bring market news while still hot from the press. Just like with LUBEZINE, subscription is free to qualified subscribers. We are hopeful that this addition to our publication will further our mission, "focusing on Africa's lubrication needs".

Thank to our supportive Advertisers and ardent readers who inspire us to put this together.

As usual there is much more to indulge in. Go on ahead and enjoy! ■



**Similar activities carried out in Tanzania by it's regulatory body, The Energy and Water Utilities Regulatory Authority (EWURA) are also highlighted in our market report.**



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years



and the best is  
yet to come



**LUBES DIARY:** Base Oils and Lubes Middle East (BLM), Abu Dhabi, UAE | **FAQS:** What are the benefits of oil analysis for fleet owners?

## TANZANIA

# Tanzania steps up regulation of the lubes industry



EWURA Communications Manager, Titus Kaguo. PHOTO | COURTESY

Owners of cars and other machineries in Tanzania may have something to smile about in the wake of which the Energy and Water Utilities Regulatory Authority (EWURA) has officially thrown its weight behind regulating the local lubricants business.

According to EWURA, all importers, producers, distributors and sellers of lubricants must have registered all types of lubricants with the authority by March 31, this year. After that deadline, the regulator won't allow any dealer to import, produce or distribute lubricants that would not have been registered.

As gathered by Daily News Tanzania, EWURA Public Relations Manager, Mr Titus Kaguo, said it had come to

the authority's attention that the situation on the ground with regard to the business of lubricants was pretty bad.

"Having successfully brought sanity into the fuel business in the country, we are now turning our attention to the business of lubricants. We are coming with full force to regulate it," Mr Kaguo emphatically stated. The EWURA Public Relations manager said a quick survey



**Having successfully brought sanity into the fuel business in the country, we are now turning our attention to the business of lubricants**

and reports from consumers revealed that fake, sub-standard and recycled lubricants were rampant.

"Generally speaking, the situation is worse. People are selling lubricants that are not fit for use, causing damage to cars and other machineries, occasioning immense loss to the owners," Mr Kaguo said. He pointed out that in injecting sanity into the business of lubricants, EWURA would fully collaborate with the Government Chemist Laboratory (GCLA), the Fair Competition Commission (FCC) and Tanzania Bureau of Standards (TBS).

Recently, EWURA issued a notice, requiring all lubricant wholesalers and/ or producers to register all the products with EWURA by March 31, this year. To facilitate the exercise, EWURA has availed its forms on its website: [www.ewura.go.tz](http://www.ewura.go.tz). The forms can also be picked from its offices. In the same advertisement, it is stated that all lubricant blending plants operating in the country and distributors must also acquire EWURA licences.

According to the authority, all lubricant distributors would be required to distribute or sell products from companies with which they would have entered into agreements. EWURA also wants all lubricant distributors to enter into agreements with dealers and must ensure they (distributors) sell the products to them and not those with whom they don't have agreements. Stakeholders in the industry, especially lubricant wholesalers and producers, according to EWURA, must sensitise distributors and other dealers on the products. ■

## ACCRA, GHANA

# Hallmark Oil to market Chevron Lubricants' top brand

Hallmark Oil Limited, one of Ghana's leading lubricant suppliers, has clinched a deal to market Chevron Lubricants' globally-recognized Texaco brand.

Texaco, one of Chevron Lubricant's master brands, includes a comprehensive range of engine oils for cars under the Havoline brand as well as heavy-duty diesel engine oils for trucks, via the Delo suite of products. With over one hundred years of experience in other regions around the world, Chevron's automotive and industrial lubricant ranges under the Texaco Havoline and Delo brands include gear oils, greases, hydraulic fluids and gas engine oils, paper machine oils and turbine oils.

Speaking on the partnership, Chief Executive Officer of Hallmark Oil Limited, Nelson Agyei, noted the market in Ghana is an extremely competitive one, hence the need to remain competitive. "We believe our ability to offer premium lubricant products utilising a global brand such as Texaco will be of significant interest to our customers, allowing us to

sustain and grow new business, with an outstanding product portfolio," he said. ■





**Nigeria loses  
N23bn to faulty  
Kaduna refinery's  
lube unit**



Inside a Fuchs Lubricants laboratory.  
PHOTO | COURTESY

JOHANNESBURG, SA

# Fuchs Lubricants South Africa creates specialty lubricants division

**F**uchs Lubricants South Africa has established a Lubritech Division effective January 2018. This follows an announcement made by the lubricants manufacturer late last year. Fuchs Lubritech GmbH is part of Fuchs Petrolub SE, the world's largest independent lubricant manufacturer, with more than 500 employees worldwide. Based in Kaiserslautern, Germany, Fuchs Lubritech operates flexibly and independently of its parent, with a specialized product range.

With the integration of the Lubritene and Lubrasa business in South Africa and Australia into Fuchs Lubricants South Africa in 2014, the company has determined that now is the opportune time to start a specialty lubricants division.

The Lubritene product range complemented the lubricants portfolio of Fuchs' mining business. The Lubrasa activities extended the Fuchs product portfolio for food-grade applications in Southern Africa. These

acquired businesses brought initial sales growth and now offer numerous prospects for further expansion in South Africa and the entire Southern African region, the company said.

"Combining these advan-

tages with the longtime specialty business of Ceplatyn Open Gear Lubricants and Cassida Food Grade Lubricants, we will hold a strong market position in the Southern African region. At the same time we have a strong team in place to increase our market share substantially and to set up new market sectors," says Bernhard Biehl, CEO of Fuchs Lubritech Group.

"Fuchs Lubricants South Africa has been purchasing products from Fuchs Lubritech for some time now but with the formation of a Lubritech Division within the company it means that we will focus much more on specialty lubricants," says Paul Deppe, managing director of Fuchs Lubricants South Africa. "The creation of the Lubritech Division shows our intent to further grow our mining and food lubricants business as well as develop new markets for Fuchs Lubritech products, for example cement, glass, wine and sugar. We have a skilled team of sales and product specialists ready to support our customers." ■

DAKAR, SENEGAL

## Petronas Lubricants sponsors Africa ECO race 2018

**T**he Petronas De Rooy Iveco team won the 10th edition of the Africa Eco Race, one of the toughest off-road competitions. The route included twelve exhausting stages and 6,500 km in three countries; Morocco, Mauritania and Senegal. According to Petronas Lubricants MD and CEO, Giuseppe d'Arrigo, the competition not only puts drivers under extremely harsh conditions but also tests the reliability of trucks and

products made to withstand tough conditions.

Giuseppe confirmed that it was the first time that Petronas Lubricants has participated in the Africa Eco Race and they are very proud to be the technical partner of Iveco and De Rooy for the competition.

As a long-time technical partner of Iveco, Petronas reports its role to be essential; development of lubricants, gear oils and coolants designed to make a name for

themselves not only in terms of De Rooy's special Powerstar trucks, but also in the global fleet of Iveco trucks that travel tens of thousands of miles every day.

"This win by the De Rooy team is a great success for Iveco and PETRONAS and proves that collaborative product development is the perfect way to help our partners drive longer with greater reliability-both on and off the road", added Giuseppe. ■

KADUNA, NIGERIA

# Nigeria loses N23bn to faulty Kaduna refinery's lube unit



Kaduna refinery.  
PHOTO | COURTESY

**T**he loss by Nigeria to the neglect of Kaduna refinery's lube breaking unit has hit N23 billion. The neglect of the all-important section clocked 23 years this year. The abandoned facility, *New Telegraph* gathered, has also worsened the prices of base oil importation into the country.

The Kaduna refinery is the only facility in Nigeria built with capacity to break base/lube oil—the major ingredient for the production of lubricants.

Checks by this newspaper showed that the base oil cracking unit of the refinery first showed signs of major mechanical faults in 1994, just two years after its inauguration, and has since been abandoned. This development has made Nigeria's lubricant market to depend totally on importation of base oil from

refineries abroad.

"The management of the refinery called the attention of the NNPC to this issue at that time," a source at the Ministry of Petroleum Resources told *New Telegraph*, adding, "Since then that unit has been left like that."

With this development, Nigeria has lost over N23 billion to the abandonment of the facility. This is as a result of the over N1 billion annual loss to the importation of base oil, which is the major ingredient of lubricants manufacturing. Base oil, which forms 85 per cent of raw material for lubricants manufacturing, is one of the products of crude oil.

Nigeria, Africa's biggest crude exporter, sells over one million barrels of crude daily to refineries abroad, swap about 445,000 barrels daily for refined product and later

buy and import base oil.

A document of the ministry of petroleum resources obtained by this newspaper at the weekend showed government's decision to up attention for the base oil sub-sector but is silent on the abandoned lube cracking unit.

Many stakeholders in the lubricants subsector who are

**» 1m barrels**  
**Nigeria, Africa's biggest crude exporter, sells over one million barrels of crude daily to refineries abroad**

**1994**  
**The base oil cracking unit of the refinery first showed signs of major mechanical faults in 1994**

aware of this development have condemned the country's dependence on importation of base oil.

Executive Secretary, Lubricants Producers Association of Nigeria (LUPAN), Mr. Emeka Obidike, appealed to government to come to the aid of lubricants sub-sector.

Although Obidike turned down request to know the exact amount that the country is losing to importation of lube oil, he maintained that billions of naira could have been saved if the country was able to stop the importation.

"It doesn't make any sense for Nigeria to export crude and later buy lube oil, which is a product of the crude for shipment into the country's lubricants market." Principal Partner, Lube services Associates, Kayode Sote, an engineer, said the lubricants market had potential to promote Nigeria's economic fortunes.

Statistics confirmed that industrial lubes accounted for 63 per cent of the total world lube consumption, about 1532 million gallons valued at \$7.6 billion (N167.2 billion) in 1993 with a profit margin of about 30 per cent shared by marketers," he said.

Sote had earlier confirmed that the lube cracking unit of the Kaduna refinery—the only facility built with capacity to break lube oil, has been in comatose since 20 years ago.

The ministry, however, stated that the government was working hard to advance the course of the lube market. "NNPC retailing business was conceived in 2001 by NNPC's top management to establish its own outlet stations.

"NNPC Retail Ltd as one of the leaders in downstream petroleum marketing has decided to venture into the marketing of its own branded lubricants, in line with the NNPC business strategy. The



initiative was to consolidate NNPC Retail position and also to complement the white products sold at its branded filling stations nationwide.

“In order to enter the market within the shortest possible time, NNPC Retail Ltd opted for a contract blending of its branded lubricants for the short-term. Under this arrangement, NNPC Retail will have ownership of its lubricant formulations and customised packaging materials.”

The ministry explained that the NNPC Retail would leverage on its already existing vast network of retail outlets and NNPC subsidiaries as channels for initial market penetration.

NNPC Retail intends to adopt a high quality of all its grades of lubricants; the initial 28 entry grades of lubricants proposed are the fast moving grades in the Nigerian market. ■

CAPETOWN, SA

## Sinopec moves closer to winning Chevron's South Africa assets



Sinopec headquarters in Beijing.

PHOTO | COURTESY

China's Sinopec Corp just recently inched closer to victory over Glencore in their battle for Chevron's South Africa and Botswana assets, saying the South African government favoured its bid. This is according to Reuters.

South Africa's Competition Commission recommended the roughly \$900 million transaction with Sinopec be approved with certain conditions, Asia's largest refiner said in a statement.

South Africa's government later

announced that it had reached an agreement with Sinopec on public interest issues and that the transaction was pending final approval.

“Implementation of the transaction is conditional on approval by the competition authorities of South Africa, and will be concluded unless the minority shareholders in Chevron South Africa successfully implement their right of first refusal,” Sinopec's statement said.

In October, the minority

shareholders in Chevron's South African subsidiary exercised pre-emption rights following delays to the Sinopec deal and brought in Glencore, which placed a \$937 million bid.

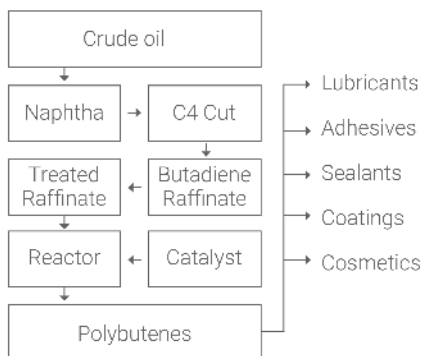
At stake is a 75 percent share in Chevron's South African subsidiary that runs a 100,000-barrels-per-day oil refinery in Cape Town, a lubricants plant in Durban and 820 petrol stations and other oil storage facilities.

The sale also includes 220 convenience stores across South Africa and Botswana.

A final decision on who takes over Chevron's SA assets will be made by South Africa's Competition Tribunal. Reuters further reported that Sinopec said it would establish a development fund targeted at small and black-owned businesses, thus increasing local procurement of goods and services. ■

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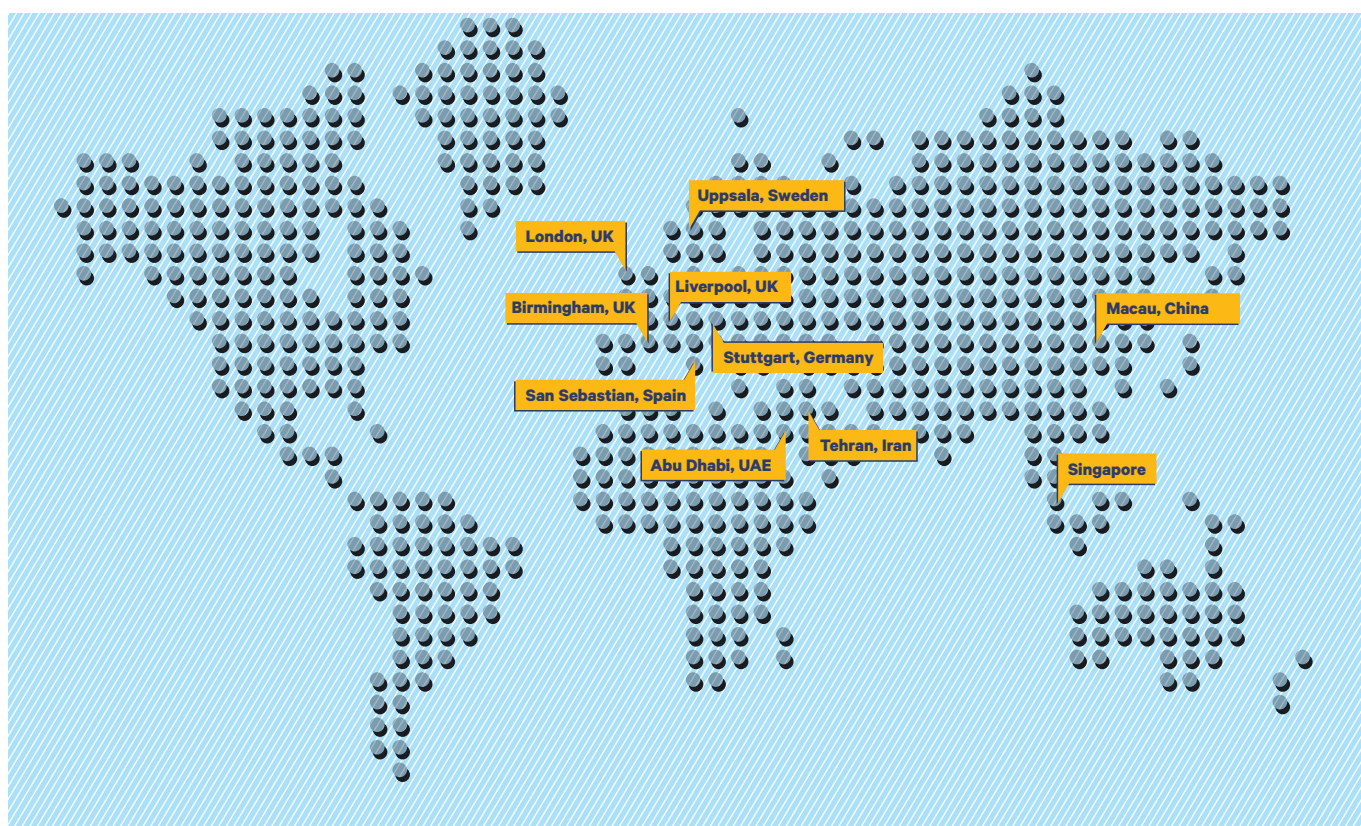
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# THE LUBES DIARY



## February TBA

### 22nd ICIS World Base Oils and Lubricants Conference

London, UK  
[www.icisworldbaseoils.com](http://www.icisworldbaseoils.com)

## March 6-9

### F+L Week 2018

Four Seasons Hotel  
 Macau, China  
[www.fuelsandlubes.com/flweek](http://www.fuelsandlubes.com/flweek)

## March TBA

### Maintec 2018

Birmingham, UK  
[www.maintec.co.uk](http://www.maintec.co.uk)

## April TBA

### 3rd Argus Iran Base Oils & Lubricants Conference

Tehran, Iran  
[www.argusmedia.com/Argus-Iran-Base%20oils-Conference/](http://www.argusmedia.com/Argus-Iran-Base%20oils-Conference/)

## April 17-18

### UNITI Mineral Oil Technology Congress

Stuttgart, Germany  
[www.umtf.de](http://www.umtf.de)

## April 21-24

### ELGI 30th Annual General Meeting

London, UK  
[www.elgi.org](http://www.elgi.org)



## April 25-26

### Base Oils and Lubes Middle East (BLM)

Abu Dhabi, UAE  
[www.baseoilubes.com](http://www.baseoilubes.com)

## TBA

### 12th ICIS Asian Base Oils and Lubricants Conference

Singapore  
[www.icisconference.com/asianbaseoils](http://www.icisconference.com/asianbaseoils)

## June 5-6

### LUBMAT 2018

San Sebastian, Spain  
 Web: [www.lubmat.org](http://www.lubmat.org)

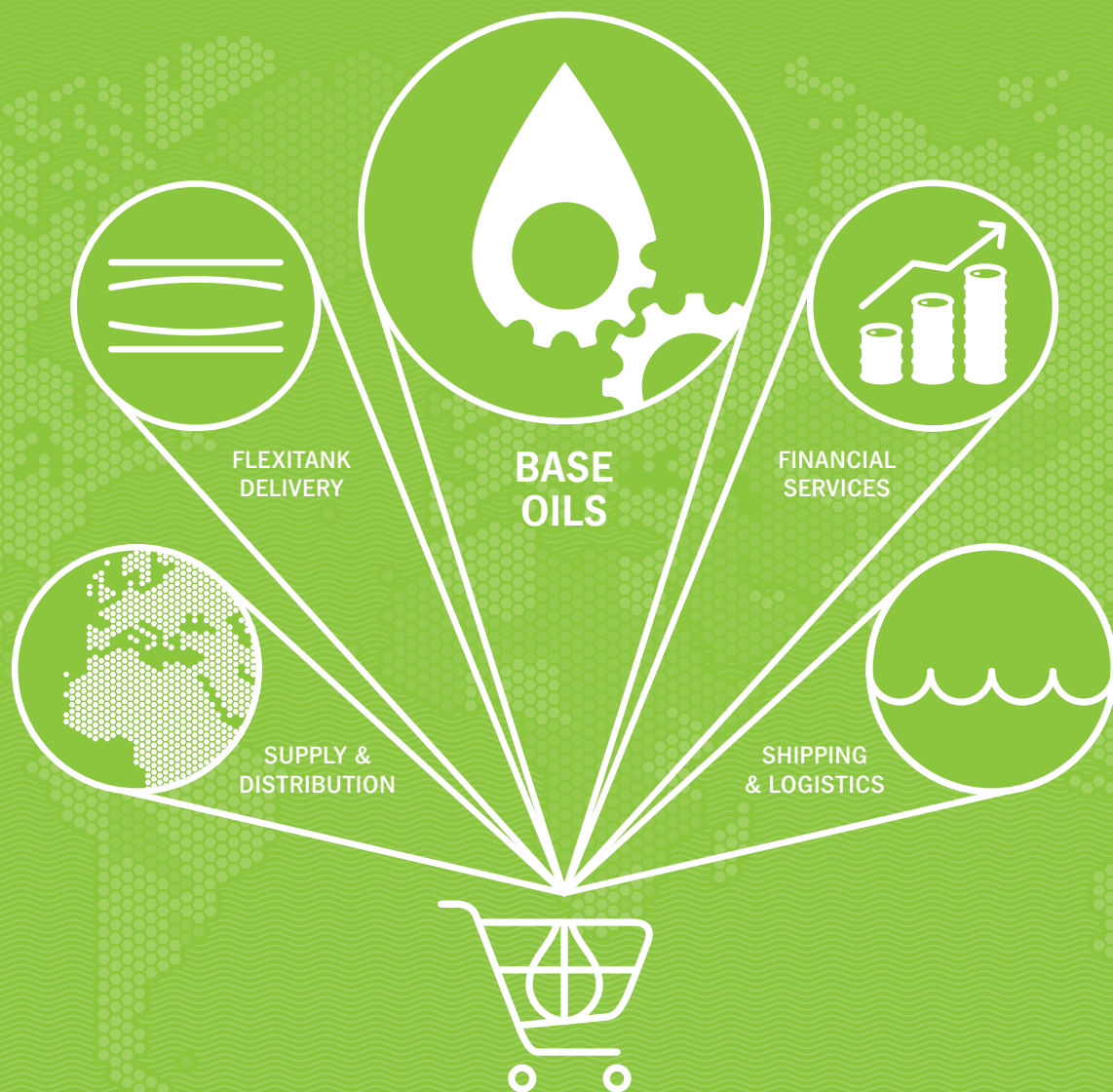
## June 18-21

### NORDTRIB 2018

Uppsala, Sweden  
 Website: TBA



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**W**hen it comes to keeping a fleet of vehicles running smoothly, regular maintenance is a major priority. A good oil analysis programme, where used oil samples are regularly tested, will boost the reliability, performance and safety of the vehicles.

## 1. What are the benefits of an oil analysis programme for a fleet owner?

Investing in a good oil analysis programme is a proven, cost-effective way to monitor component condition in various engine types, automotive transmissions, gearboxes, differentials and other drive train components. Through regular monitoring, minor mechanical problems are detected and can be repaired before they become major problems.

In truck fleets, oil analysis testing can detect and identify ingested contaminants (namely dust, dirt, water) and system contaminants (fuel, glycol/coolant and soot). Left unattended, these contaminants can cause a range of problems from increased wear to catastrophic component failure.

By measuring contaminant levels and impurities regularly, this creates a snapshot of the condition of the oil and how it is performing. Accurate diagnosis of the oil analysis results enables fleet owners to reliably increase the oil drain intervals, and as oil is a huge cost, by extending its useful life without risk, this translates into direct cost savings for the fleet owner.

Oil that remains in good condition can reduce downtime – this is a critical performance booster in any industry that relies on a fleet of vehicles.

## 2. When should testing be done on the fleet?

Testing is most effective when performed at regular intervals, as this creates a trend history of performance over time.

Although the original equipment manufacturer's recommendations provide a good starting point for developing preventive maintenance practices, sampling intervals can easily vary. How critical a piece of equipment is to production is a major consideration for determining sampling frequency, as are environmental factors such as hot, dirty operating conditions, short trips

# What are the benefits of oil analysis for fleet owners?



PHOTO | COURTESY

with heavy loads and excessive idle times

Fleet performance levels can be examined using the trends and providing insight to fleet owners as to what adjustments to make, and when to schedule necessary maintenance.

Samples that are taken consistently provide highly accurate information about each vehicle's performance and enable the fleet owner to plan an effective lubrication management strategy.

## 3. What are the three steps to oil analysis testing?

Usually, oil analysis involves three stages:

- Correctly taking the oil sample from the component
- Sending the sample to your oil analysis lab and
- Diagnosing, or interpreting the results of the oil test and acting on the information, or the recommendations of the diagnosticians.

## 4. What is the correct way to take an oil sample?

All samples should be taken at operating temperature (hot) and the oil should be well mixed. Incorrectly-

taken samples can lead to inaccurate interpretation of the results, therefore it is essential that samples are correctly taken, preferably by a trained technician.

When taking a sample, the sampling point should be wiped with a clean rag and a small amount of oil should be flushed first to ensure no foreign contamination enters the bottle.

## 5. How can I save money for my fleet and reduce downtime?

- Early detection of abnormal wear
- Early detection of oil degradation
- Early detection of contamination
- Early detection of impending failures
- Verify oil in use
- Optimise oil change intervals
- Avoid unnecessary overhauls
- Avoid loss in production
- And save time and money!

*FAQ courtesy of condition monitoring specialists WearCheck South Africa. Using techniques such as the scientific analysis of used oil and other reliability solutions services, they help clients to save money through preventive maintenance. WearCheck has 15 laboratories around Africa and beyond. Contact them via email: Email: [support@wearcheck.co.za](mailto:support@wearcheck.co.za); Website: [www.wearcheck.co.za](http://www.wearcheck.co.za)*





group II base oils

## this is what progress looks like

### Non-conformance from 28% to zero

Deojay, a dynamic independent lubricant company in Durban, South Africa, struggled with losses. Non-conformance averaged 28% due to the high variance in quality of imported Group I base oils.

The technical director at Umongo, their additives supplier, recommended that Deojay switch to Chevron Group II across the board.

Today Deojay has zero non-conformance, a 19% growth in sales, and a hydraulic oil recognized as the cleanest in Sub-Saharan Africa!

### Let's talk about your business.

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Jackie Le Roux  
Managing Director  
Deojay Petroleum

### SYNTHETIC ENGINE OILS

# Valvoline introduces new modern engine full synthetic motor oil

**L**eading worldwide supplier of premium branded lubricants and automotive services-Valvoline recently unveiled Valvoline Modern Engine Full Synthetic Motor Oil. According to Valvoline, this new product is specifically engineered to protect against carbon build-up in Gasoline Direct Injection (GDI), turbo and other engines manufactured since 2012.

"For over 150 years, Valvoline has been at the helm of product innovation, meeting consumer needs with smart science and solutions. Our team is leading the industry with the launch of Valvoline Modern Engine," said Heidi Matheys, Valvoline chief marketing officer. He continued to say that as part of their full synthetic portfolio, Modern Engine will combat potential carbon build-up in newer engines – an issue that degrades vehicle performance. According to Heidi, most consumers are unaware that the

issue even exists, even though it has the potential to impact roughly 100 million newer vehicles on the road today.

In a statement issued by the company, "engines in vehicles manufactured in 2012 and newer models are built smaller and more efficient than ever. As a result, they run hotter, and are more susceptible to developing Low Speed Pre-Ignition (LSPi) knocking due to abnormal combustion, as well as fuel and oil related carbon build-up. These issues could lead to power and fuel economy loss – and ultimately, engine breakdown."

Valvoline through this innovation seeks to be at the forefront of combating carbon build-up in newer engines. The company prides in being the first to market an innovative carbon build-up cleaning solution, Easy GDI Fuel System Service with Power Dispersal Technology as from 2017. With this new product development Valvoline says that it's going to not only be a way to remove carbon build-up but can also

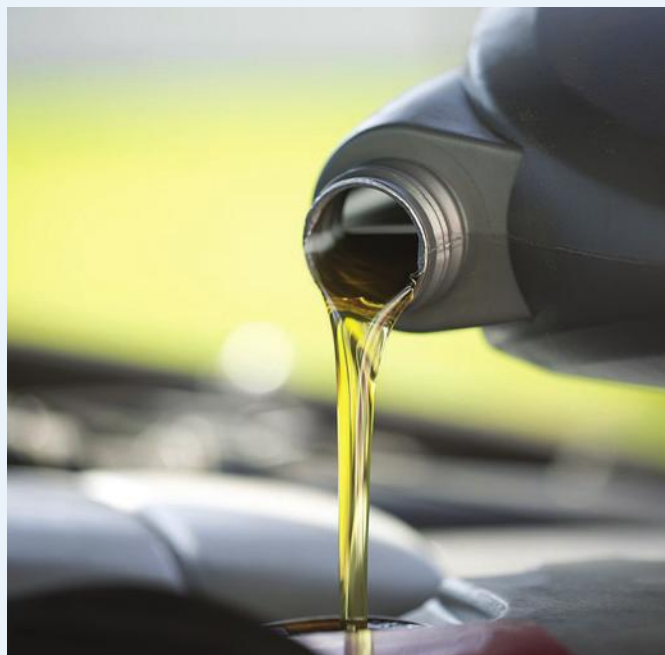


PHOTO | COURTESY



**According to Valvoline, this new oil seeks to combat carbon build-up in newer engines**

## 150 years

**"For over 150 years, Valvoline has been at the helm of product innovation, meeting consumer needs with smart science and solutions. Our team is leading the industry with the launch of Valvoline Modern Engine."**

– Heidi Matheys, Valvoline chief marketing officer

protect today's modern engines.

"Valvoline Modern Engine captures key learnings from extensive research on how motor oil formulation — namely oil properties and additive composition — not only influence but can actually help prevent the formation of carbon deposits in the newest engine models," said Fran Lockwood, Valvoline chief technology officer. "With this innovative new product, we are seeing a significant reduction of carbon build-up. Our research indicates that Modern Engine provides 30 percent better protection against carbon build-up than industry standards." ■

### SPECIALTY GREASES

# Klüber introduces silicone greases



PHOTO | COURTESY

**K**lüber Lubrication recently introduced a new silicone grease intended for automotive applications, including cables, slideways, seals and window regulators.

Arosta 471 is based on silicone

oil and a special lithium thickener. Klüber assures that the oil is formulated to offer oxidation stability and water resistance, it is compatible with various rubber and plastic materials, not including silicone rubbers.

According to Klüber, the new grease features a wide service temperature range, resisting high temperatures and ensuring smooth running of components at low temperatures.

The grease manufacturer further reported that the new grease is designed to provide noise and vibration dampening performance whilst reducing friction and reducing squeaking noises.

In addition, Klüber recently unveiled a new lubricating grease that is neutral in odour and taste

for valves and fittings in sanitary applications, such as drinking water valves. Unisilikon LCA 3801, which according to Klüber is based on silicone oil and a calcium soap. "It provides wetting in narrow lubricating gaps and friction points that are difficult to reach. Approved for use in all friction points exposed to water or in permanent contact with drinking water, the grease also offers proper sealing and viscosity, allowing it to achieve uniform operational smoothness with cold or hot water," stated Klüber. ■



# Tata Motors bets big on newly unveiled Tata Motors Genuine Oil



Inside a Tata Motors plant. PHOTO | COURTESY

**L**eading global automobile manufacturer, Tata Motors Limited, recently launched Company Branded 'Tata Motors Genuine Oil' exclusively for Tata Motors Commercial Vehicles range in the Indian Market.

The product that were launched included engine oils API CI-4, 15W40 & API CH4, 15W40, gear oil 80W90 and rear axle oil 80W140.

Formulated and tested for Tata Motors vehicles, the company stated that this range of superior quality multi-purpose oils are suitable for the new generation engines and other aggregates, thereby encouraging their customers to use the right oil in the right environment for better performance.

According to Tata motors, this new range of Company Branded oils have been developed as per regulations and specifications required for the Indian commer-

cial vehicles market and will be exclusively available across 1400 Tata Motors CVBU-authorized workshops.

Commenting during the launch, Mr R. Ramakrishnan, Senior Vice-President, Customer Care, CVBU, Tata Motors Limited said: "We at Tata Motors have always worked towards creating a delightful experience for all our customers through various aftersales products & services



**The oils that come in four variants are specially formulated for new generation engines to enhance vehicle performance and are available across 1400 Tata Motors CVBU-authorized workshops**



## FACTBOX

### Tata Motors Ltd

**FOUNDED:** 1868

**COUNTRY OF ORIGIN:** India

**NO. OF EMPLOYEES:** 695,000

"Tata Motors Limited, a USD 42 billion organisation, is a leading automobile manufacturer with a portfolio that includes a wide range of cars, utility vehicles, trucks, buses and defence vehicles. Our marque can be found on and off-road in over 175 countries around the globe. Part of the USD100 billion Tata group founded by Jamsetji Tata in 1868, Tata Motors is among the world's leading manufacturers of automobiles. We believe in 'Connecting aspirations', by offering innovative mobility solutions that are in line with customers' aspirations."

for our Commercial Vehicles. We are committed to provide our customers with the best lubricant technology expertise and support in the competitive market place.

Launched in four variants, Tata Motors Genuine Oil is specially formulated for our new generation engines to enhance the performance of the vehicle.

Be it for better mileage, longer aggregate life or protection, these oils offer the right solution for each of our products." ■

# Petro-Canada Lubricants launches new synthetic gear oil

**P**etro-Canada Lubricants has announced that its TRAXON gear oil line has now expanded to include TRAXON Synthetic MTF 75W-80. According to Petro Canada, the new synthetic oil is a premium performance commercial vehicle manual transmission fluid, formulated to provide extended drain capability (up to 400,000 km or 250,000 miles), deliver all-weather protection, and reduce maintenance costs.

The new product is recommended for extended drain service in heavy duty (class 6, 7, and 8) manual transmissions, and has been fully approved by Volvo and Mack for use in their synchronized automated manual transmission applications (Volvo I-Shift and Mack DRIVE). This manual transmission fluid is intended for manual gear boxes of the G7/8, S, SR, SPO, AT and VT series from Volvo GTT up to a 400,000 km (250,000 miles) drain interval.

During the launch Petro Canada assured that TRAXON Synthetic MTF 75W-80 exceeds key performance parameters set by Volvo's I-Shift specification (STD 1273.07-97307). "We are thrilled to enhance the TRAXON product line. We are committed to developing top-tier products that deliver operational excellence and cost-saving results for our customers," said Barnaby Ngai, category portfolio manager, Heavy Duty Engine and Driveline Oils, Petro-Canada Lubricants. ■

## OIL CHECK

# Shell ready to run with new 'Fitbit for your car' monitor

Royal Dutch Shell aims to install Fitbit-type monitors in a million cars this year as part of an expansion of its consumer-facing oil products business. The Anglo-Dutch group has tested its Fitcar product in about 3,000 vehicles in the United States, offering a transport equivalent to wearable health devices. The monitor sends data from the car to apps on owners' phones to alert them on, for example, emerging problems with engines.

In America, the devices have prompted drivers to visit Shell's network of more than 2,000 service stations for an oil change or maintenance.

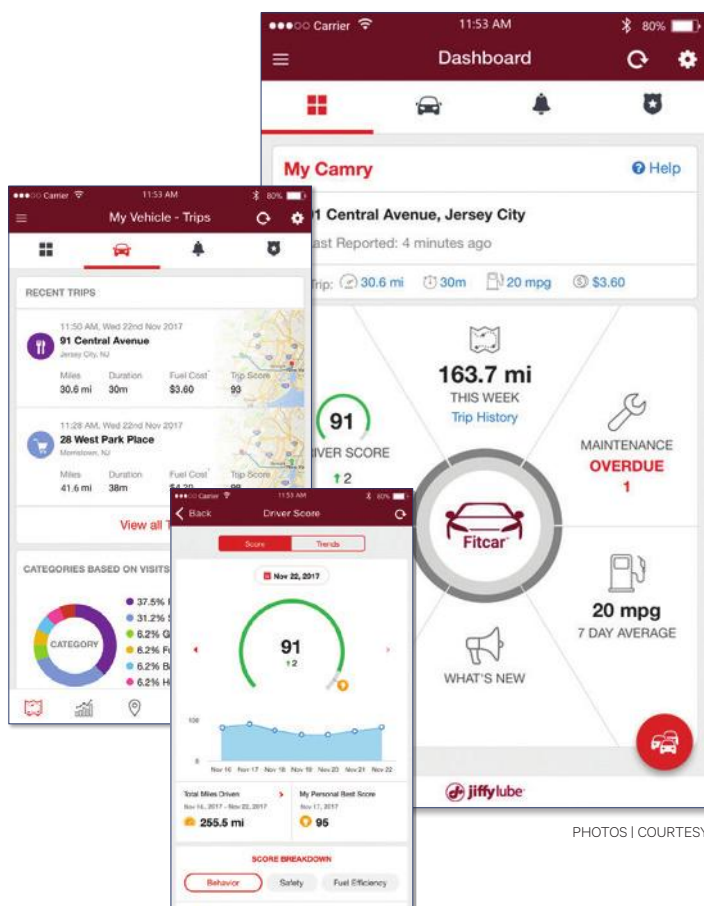
Ben van Beurden, its chief executive officer, said in November last year that the company was increasing investment in its oil products business "to add materiality to this very differentiated and high-returns part of our portfolio, particularly in marketing".

This includes its lubricants business, which makes 2,500 oil products and has an 11 per cent market share around the world.

"One in nine machines, whether car or bus or industry, is protected by Shell lubricants," Huibert Vigeveno, executive vice-president of its global commercial division, which comprises lubricants, aviation fuels and marketing, said, adding that he saw strong growth potential for the group's premium engine lubricants products, which promise to help to improve vehicle efficiency.

The Fitcar offering is one way that Shell aims to expand its market share, initially through its Jiffy Lube service station subsidiary in the United States. If successful, it could roll the product out to other markets, including Britain.

The technology works using a device costing between \$50 and \$100 that plugs into the car's diagnostics port, usually located below the dashboard. This sends



PHOTOS | COURTESY



**"It's of crucial importance to partner with a globally acclaimed lubricants manufacturer with whom we share the same objectives"**

– Diego Clement – Head of Motorsport at Husqvarna Motorcycles



data to an app. Shell said that it could help to save customers' money by identifying problems before the car breaks down.

"The proposition is you can have an app and you'll be able to see what's going on, what speed you are driving at, how much fuel you are using and even how your lubrication is going," added Vigeveno. ■

## OEM RECOMMENDATION

# Motorex becomes official lubricants partner of Husqvarna motorcycles

Swiss-based lubricants producer, Motorex, has partnered with Swedish motorcycle brand, Husqvarna. This agreement will see Motorex become the official lubricant partner of the global Rockstar Energy Husqvarna Factory Racing team. In addition to increasing visibility to the Motorex brand through involvement in top-level

racing activities, Motorex engine and gearbox oils will be used as the first fill in all Husqvarna Motorcycles.

Additionally, a variety of care and maintenance products from the comprehensive Motoline product range will be recommended for all servicing of Husqvarna Motorcycles through the worldwide dealer network and

owners. Bucher Motorex Group CEO, Edi Fischer recognized that the new cooperation with Husqvarna Motorcycles would comprise all the components needed for success – a dedicated cooperation in R&D, in production, in racing and in the aftermarket business with the Husqvarna dealers. He continued to say that the sporting spirit together with the targeted attitude of both companies contributes to the fact that as Motorex they are very confident about this exciting partnership.

Representing Husqvarna was Diego Clement – Head of Motorsport at Husqvarna Motorcycles who acknowledged that the new agreement with Motorex ensures that they have a technical partner who can they can fully rely on. "Motorex products are well-proven at the highest level of racing and we are more than pleased that the entire Rockstar Energy Husqvarna Factory Racing team will be using them through 2018 and beyond", added Clement. ■



# ExxonMobil invests in Yoshi, on-demand vehicle care start-up

**E**xxonMobil announced its investment into Palo Alto-based Yoshi Inc., a Silicon Valley start-up offering on-demand fuel delivery and vehicle care service. As a result, ExxonMobil will now provide Yoshi Inc. with fuels and lubricant products and Yoshi Inc. will continue to manage the delivery service.

Yoshi Inc. provides a mobile one-stop-shop vehicle care service, bringing fuel-ups, oil changes and car washes direct to the consumer. Customers can schedule gas deliveries and other services directly from their smartphones or computers.

The subscription-based service is currently available to customers in Silicon Valley, San Francisco, Nashville, Austin, Atlanta, Los Angeles and Chicago. But the company has also announced a fresh \$13.7 million in funding via a series A round led by General Motors Ventures and ExxonMobil, with contributions from Y Combinator, the Durant Company, and Arab Angel, among others. With

this cash injection, Yoshi said it plans to expand to a further 25 metropolitan areas this year.

“The on-demand economy is changing nearly every aspect of our everyday lives, including consumer expectations about the way fuels and lubricants are purchased, delivered and used,” said Adam Wariner, Fuels and Lubricants Innovation Manager. “We believe the simplicity and convenience of this direct-to-vehicle care service will attract new customers



**“The on-demand economy is changing nearly every aspect of our everyday lives, including consumer expectations about the way fuels and lubricants are purchased, delivered and used”**

– Adam Wariner, Fuels and Lubricants Innovation Manager

to Exxon and Mobil branded products.”

“We believe Yoshi has a big opportunity to be part of the transformation underway in the automotive industry relating to how vehicles get fuelled and serviced, which can more than double a vehicle’s cost over its life-time,” said Yoshi CEO Nick Alexander.

Fuel delivery varies by region, but the company stated it should be around \$7 for the service, plus the price of the gas.

Drivers can also elect to pay a \$20 monthly membership, which includes free weekly deliveries. Elsewhere, a basic wash can cost around \$45, with a full “detail” clean costing \$175, though prices may be higher in areas such as San Francisco.

Yoshi is one of a number of start-ups operating in the on-demand car maintenance realm following the likes of California-based Booster and London-based Zebra Fuel. ■

## Total launches Hi-Perf lubricants, eyes 10% share of 2W market

**G**lobal Oil marketing player and fourth largest energy company, Total, is betting big on India. The company, which began operations in the country in 1993, has launched its high-performance lubricant for the motorcycle segment called the ‘Hi-Perf’, which it says completes its complete range of offerings for the domestic motorcycle segment.


As per the company, the new range of lubricants is designed for complete protection and offers improved performance for motorcycles. The company is eyeing lubricant market growth from the two-wheeler segment (motorized) in the country, which has surpassed China.

Total Hi-Perf is claimed to protect motorcycle engines against sudden application of brakes, frequent gear changes along with heavy usage of the clutch, often experienced by two-wheeler riders in the country.

Commenting during the product launch, Dilip Vaswani, chairman and MD Total Oil India, said: “With an increasing demand for greater mobility along with rising disposable income, there is significant growth opportunity for the two-wheeler segment in India, which has recently surpassed even that of China. We believe that innovation and sustainability are the pivotal drivers of growth in this segment and our products and offerings stand true to this. We see tremendous potential in India and are here to make a lasting impression through our product offerings and solutions.” The energy major says its Hi-Perf it nationwide marketing campaign targets 40,000 garages, 80,000 mechanics and 13,000 retailers. ■



PHOTO | COURTESY



# Premium range motor oils formulated for **performance**

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lubricants

# Regulating the Kenyan Lubricants Industry

PHOTO | TRAVEL MANIA/SHUTTERSTOCK

**Kanyingi Kuria**Staff writer at Lubezine Magazine.  
Email: [kanyingi.kuria@lubesafrica.com](mailto:kanyingi.kuria@lubesafrica.com)

**A**s Africa goes hard on being possibly the next global industrialization hub, some of its regions have really geared up for trade. The East African region has recently emerged as one of the major export destinations and offered a steadily growing market for lubricants and other petroleum products from the United Arab Emirates, Europe and Middle East, a factor attributed to increased industrial manufacturing activities and an expanding middle class.

As the demand for lubricants becomes more pronounced, so has the need to ensure healthy competition through establishment of standards and policies. The Standards Bureaus in the respective countries have without a doubt helped to introduce a level marketplace as far as the importation of base oils, additives and finished lubricant is concerned.

It's now close to half a century since the government agency – Kenya Bureau of Standards (KEBS) – was established by an Act of Parliament in July 1974. Mandated to prepare and formulate standards of

products, materials, processes and measurements, KEBS has been in the lead effecting certification of all goods, products and materials making their entry into the Kenyan borders.

Certification of goods, services and materials is one task that is characterized by multiple procedural tests. To adequately satisfy this need, the Bureau of Standards agency is comprised of divisions such as; Standards Development and International Trade Division, Quality Assurance Division, Testing and Metrology Services Division, and Finance and Administration Division.

KEBS operations are as a result of formulated policies all in an effort to promote and achieve certification levels that are recognized in national, regional and international fronts. The National Standards Council is in charge of making policies which automatically gives it the power to oversee day-to-day administration and financial management of the Bureau.

The mandate to set minimum quality standards is also extended to the industry stakeholders such as ERC (Energy Regulatory Commission), PIEA (Petroleum Institute of East Africa), NEMA (National Environmental Management Authority), KRA (Kenya Revenue Authority) and OMCs (Oil Marketing Companies). These members form the technical committee which is convened by KEBS.

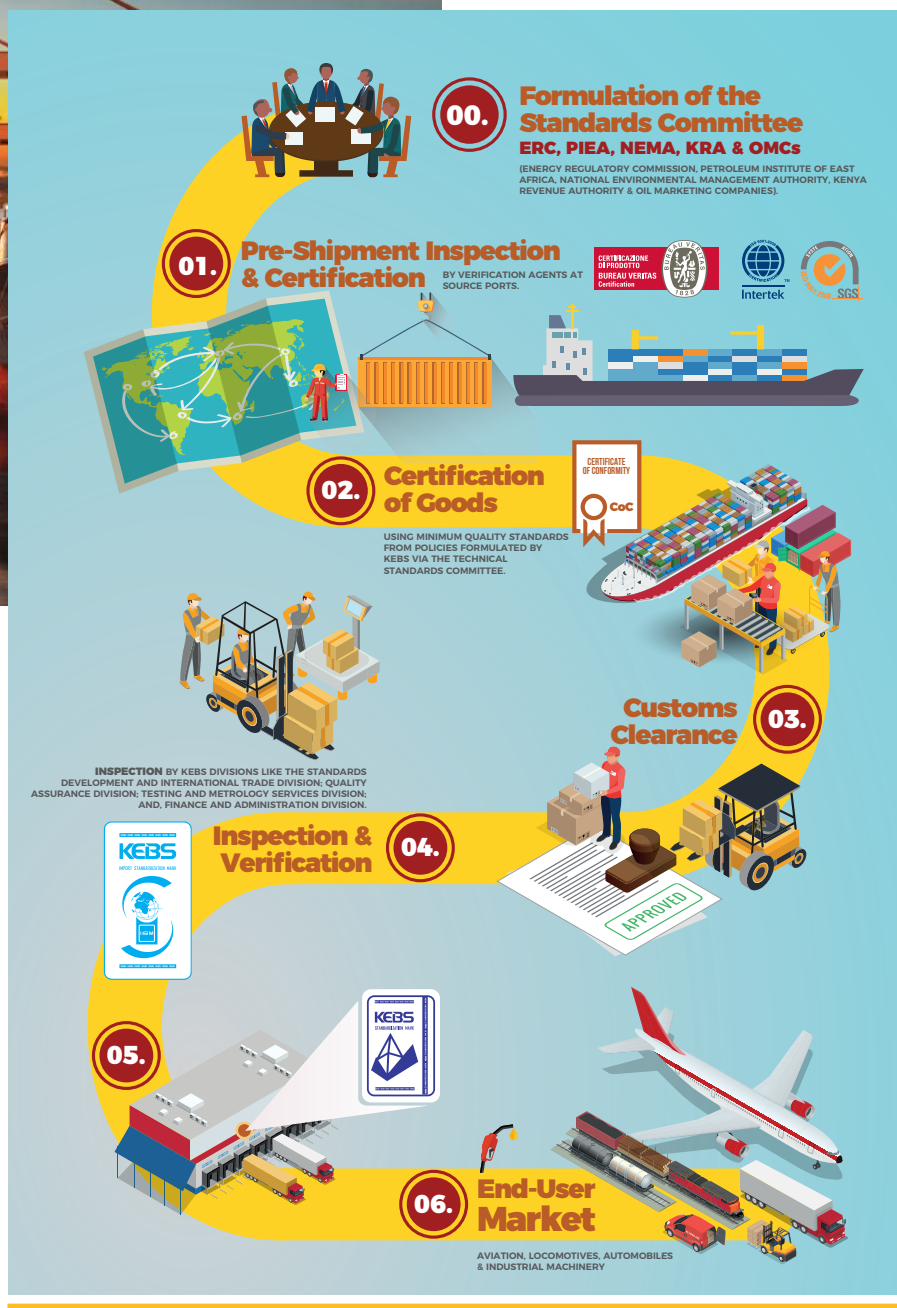
The committee's main role is to contribute toward standards development. Technical assistance from the committee members is what KEBS aims to primarily achieve. The committee meetings whose agenda vary depending on the issue at hand discusses minimum quality requirements for finished lubricants as well as base oils.

It's after the standards are reviewed by KEBS that they now become policies and can then be put out in the public domain. The policies being implemented by KEBS are ultimately tied with inspection.

All exporters and importers must



## AN OVERVIEW OF THE IMPORT PROCESS IN KENYA



GRAPHIC | WILLIAM MUSHIVOCHI

ensure that their products fully comply with the set standards of quality. The Kenyan government prescribes the PVoC (Pre-Export Verification of Conformity to Standards Programme) and obtaining of the mandatory PVoC certificate of conformity to ensure acceptable standards are maintained.

Importers of lubricants, base oils and additives into Kenya are expected to present their products to KEBS appointed

**The Kenyan government prescribes the PVoC (Pre-Export Verification of Conformity to Standards Programme) and obtaining of the mandatory PVoC certificate of conformity to ensure acceptable standards are maintained**

inspection agents for conformity verification and, on successful verification, obtain a Certificate of Conformity (CoC) in the country of supply.

In the case of consignments shipped without or before inspection, importers are expected to apply for a destination inspection subject to KEBS acceptance and pay a 15% penalty and a 15% bond of the CIF value, and cover the costs of the test.

KEBS has contracted several verification agents such as Intertek, SGS Kenya and Bureau Veritas. Intertek specifically has closely worked with KEBS, a partnership that saw award of contract extension in 2015. This gave way to Intertek's operation of the PVoC programme to further regions such as Europe specifically the UK and also the Americas; North and Latin America, China region, Australia, Indian sub-continent and the UAE.

Closer home, Intertek was contracted to conduct the programme in the Western African region as well.

In September 2015 KEBS introduced an additional regulation that require all imported finished products to be labelled with the Import Standardization Mark (ISM) sticker.

This sticker is issued in Kenya directly by KEBS. To apply for this sticker the importer is required to submit to KEBS the following documents; the packing list, the ISM application form, the Import Declaration Form and the Certificate of Conformity (CoC) issued by an approved PVoC service provider. KEBS can only issue final clearance of the goods from the Port of Entry once the application for ISM stickers is submitted.

The certificate of conformity (CoC) and the ISM are mandatory customs clearance documents in Kenya. Without these documents, importers of consignments of products arriving at points of entry usually experience delays and possibly denial of admission into the country.

To check that all players in the industry are playing by the established rules and regulations, KEBS carries out random inspections to scout for non-conforming products. This is conducted even after imported products have long been cleared either through sample testing, physical inspection and documentary authentication at the point of arrival.

In extreme cases where fake or counterfeit products are suspected KEBS conducts raids on such warehouses. ■

MAINTENANCE

# Technological and operational effects on lubricant specifications and maintenance

Eco car engine. PHOTO | RUKSUTAKARN STUDIO/SHUTTERSTOCK



**James Wakiru**

James is a seasoned industrial engineer with work and research experience in the maintenance and technical marketing field. He can be reached on; [james.wakiru@lubesafrica.com](mailto:james.wakiru@lubesafrica.com)

**T**he history of lubricating oils dates back to the period when early engineers were faced with the challenge of friction of machinery that would result into operational slow down or wear of the machine itself. Animal fats were among the earliest lubricants to be used, about 2000-3000 years ago, to counter this challenge due to their ability to reduce friction and improve machinery efficiency. Later on there were also plant-derived oils and crude oil from natural seepage was being applied in machinery and other moving parts.

Crude oil processing has evolved dating back to early 20th century where improvement of lubricant performance was dealt with using vacuum distillation and treatment such as using clay to deal with undesirable elements. Solvent processing, then solvent refining were introduced along with inclusion of additives in 1947 to enhance performance and extend equipment life, a first towards lubricant specifications. Automotive lubricants performance has been regulated mainly by the American petroleum Institute (API) and the OEMs whilst the standard by the society of automotive engineers (SAE). In the industrial sector, the international standardization organisation (ISO) has been adopted widely.

Lubricant performance is mainly driven by API, OEM requirements and to some extent the divergent operational conditions specific to various industrial setups. New technology ploughed into the industrial equipment has in some instances challenged the lubricant

formulations and advanced design of new formulations to meet the requirements and conditions.

Hence, despite the available lubricant specifications accepted globally and driven by the OEMs, additive manufacturers, regulatory bodies such as SAE, API and ISO, dynamic technological and operational changes pose a challenge to the lubricant specifications as well as maintenance of the equipment.

There are several factors that are inducing significant technological changes in the design of equipment that subsequently impacts lubrication and maintenance of automotive and industrial setups.

These factors attribute to a high extent the variation and development of different lubricant specifications both as commercial formulation or as specific formulation. They also cause a significant impact on the maintenance strategies and actions required. One of the key factors driving specifications is

environmental concerns. While degradation of oils naturally in the environment is very slow, poor disposal or accidental spillage of used oil and oil in use respectively, is harmful to the environment. More importantly, operations near water bodies such as fishing and dredging, farming and in the air portend higher environmental risks that biodegradable lubricants could be used. In some industrial cases, air pollution due to oil vapours emitted to the environment especially at high temperature operations could require to be addressed.

Another driver of specification is the Emission Targets set globally and by Governments. Most nations in the developing world through the Carbon Emission Reduction Target (CERT) have signed agreements to impose a target on all gas and electricity suppliers. This translates to these suppliers creating energy efficiency awareness measures whose target especially, has trickled down to developing nations especially in Africa where the emission reduction topic is starting to shape environmental conservation conversations.

The introduction of new technology in both auto and industrial sectors which was initially projected for the developed countries is now trickling to non-developed and developing countries, a challenge to fast track maintenance technologically.

Tied along with greenhouse gases (GHG) emission is the advancement of energy efficiency in the current and future technologies. To balance the GHG requirements, equipment inevitably must optimize the energy efficiency to wholesomely attain the goals. The increasing concerns of GHG emissions and security of oil supply globally shapes policies advancing low carbon equipment a priority especially from the OEM sector. The »





# THE SEVENTH BASE OIL & LUBES MIDDLE EAST 2018

25 - 26 April 2018, Abu Dhabi, UAE



The **7th Annual Base Oil and Lubes Middle East Conference (BLM 2018)** is organized by Conference Connection in Abu Dhabi, UAE on 25-26 April 2018. BLM 2018 will continue to provide a good spread of topics, high calibre speakers, quality presentations and premium networking opportunities for the base oil and lubricant industry. Leveraging on strong NOC-MPGC relationships, BLM has enjoyed the patronage and support of the Bahrain National Oil Company (BLM 2012), Emirates National Oil Company (BLM 2014 & 2017) and Abu Dhabi National Oil Company (BLM 2013, 2015 & 2016) and in 2018, BLM will be supported by the Abu Dhabi National Oil Company. Continuing its focus on the global base oil business, BLM provides both knowledge sharing and networking opportunities, with participation from leading producers, suppliers, manufacturers, re-refiners, traders and end-users from twenty-five countries.

## WITH PARTICIPATION FROM:

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- **Mr. Ahmed Saleh Al Hamed**, Manager, Base Oils & Special Products, Refined Products Division, Abu Dhabi National Oil Company (ADNOC), UAE
- **Mr. Prashant Bhatt**, Manager - Lubricants Technology, ENOC Lubricants Marketing, UAE
- **Ms. Caroline Huot**, Global Head - Lubricants, Cockett Marine Oil (Asia) Pte Ltd, Singapore
- **Ms. Geeta Agashe**, President, Geeta Agashe & Associates, LLC, USA
- **Dr. H E Henderson**, President, K & E Petroleum Consulting, LLC, USA
- **Mr. Alexandre Gendron**, Global Marine Product Line Specialist, Chevron Oronite, France
- **Ms. Sushmita Dutta**, Project Manager, Kline & Company, USA
- **Mr. John Coxon**, Principal, John Coxon & Associates Ltd, UK
- **Mr. Denis Varaksin**, Director, Base Oil and Slack Waxes, DYM Resources GmbH, Germany

(This is only a partial list of speakers. Please visit [www.baseoilubes.com](http://www.baseoilubes.com) for updates.)

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» recent increased uptake of hybrid electric vehicles (HEVs), plug-in hybrid electric vehicles (PHEVs) and electric vehicles (EVs) leads to significant shifts in technology which affects lubrication and maintenance practices.

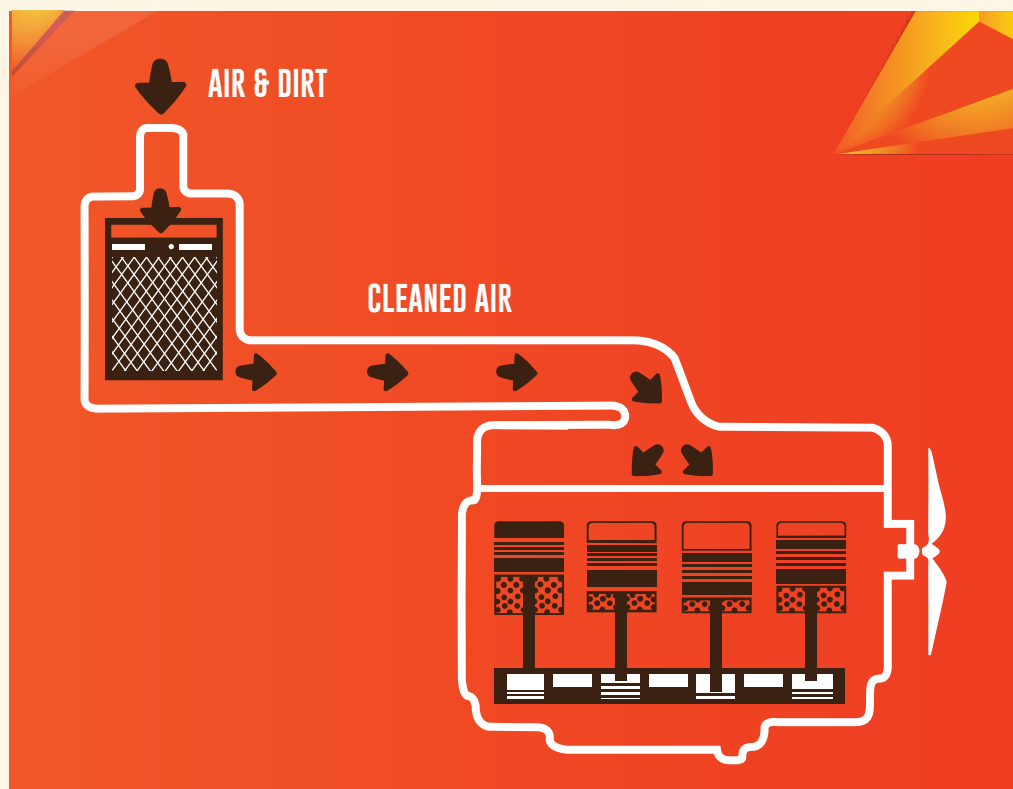
A rather interesting factor is the manufacturing processes being regularly adopted for products. Numerous products manufactured for divergent purposes from food to construction materials have diverse requirements. The requirements deal with not only quality and safety integrity but also aesthetic characteristics. Aesthetic effects such as surface finish in manufactured products and inherent requirement of food safety in a food processing plant, drive diverse formulations and lubricant specifications.

Operational conditions of mechanical systems play a pivotal role in determining the specifications of lubricants to be applied even as initial fill. Elevated or moderate temperature, dusty, humid and other applications, dictate the lubricant specifications to robustly maintain the equipment and ensure longer useful life.

Another factor here for instance remotely located equipment such as offshore wind turbines do not have frequent preventive maintenance, and as such the lubricant requires to have longer drain interval and to overcome challenges brought by the environment. The operational environment would possibly necessitate hybrid maintenance strategies with inclusion of opportunistic maintenance to address maintenance of the equipment.

Maintainability of lubrication systems is a factor that cannot be ignored in the maintenance field. The characteristics of design and installation determine the probability that if a lubricant deviate in performance requirements, it can be restored to its accustomed operable state within reasonable timeframe using the prescribed practices and procedures.

This aspect deals with two variants: first is the serviceability of the lubricant systems which deals with the ease of conducting inspections and preventive maintenance while the second is the ease to restoring the lubricant to acceptable performance. With the new technologies advanced due to the reasons advanced earlier and many others, this aspect of maintainability of lubrication systems is a topic that requires more attention to overcome current and futuristic challenges. ■



## MAINTENANCE

# Diesel engine filtration

*In Lubezine's Vol. 21 of June 2017, I wrote an article on the basics of Filtration for diesel engines. I will now give an insight on air filtration in diesel engines.*

By Sam Wairachu

## AIR FILTRATION Importance of air filtration

Air filters are critical components of heavy duty diesel engines and the air that these engines 'breathe' needs to be as clean as possible.

Poor air quality will greatly impact the performance of a diesel engine. An average Heavy Duty Diesel engine like that of a truck requires between 13,000 to 20,000 litres of air to burn just one litre of fuel. Air in the open environment is not pure and contains impurities

such as fumes, dust, smog and other particles that are not always visible to the eye, but are harmful to the engine. They compromise on the quality of air and can lead to severe damage of engine components.

Under normal highway conditions, the air consumed by a 16-litre engine contains almost 20 kilograms of dirt/contaminants per 100,000 kilometres.

To achieve peak performance and life from the engine, the air being "breathed in" must be clean and if dirt or other contaminants are allowed to pass through the air intake system and into the engine, problems will develop.

Dirt that gets through an engine's air filter system enters the combustion chamber mixing with fuel and oil on the cylinder walls. It then passes to the piston rings, ring grooves and crankshaft. This dirt scores cylinder walls, rings and bearings and gums up rings and valves, blocking off oil passageways. Dirt in the system results in the generation of wear causing particles from the metals it removes which further promotes wear and tear on the engine. As a result, the engine loses power from compression loss and begins using more oil.

Empirical studies have shown that the life of a diesel engine is directly related to the amount of time that it takes for that diesel engine to ingest between 100 and 200 grams of fine dirt of various size particles.

## Components of an air intake system

High quality air filters are engineered to deliver



optimized air quality and provide the best overall performance and service life.

A typical air intake system generally consists of:

- Weather hood
- Piping/ducting
- Pre-cleaner
- Air housing
- Elements
- Restriction gauge

### **Air intake - An open loop system**

The air intake is an open loop system, and the air filter has only one opportunity to filter the contaminant out of the intake air. If the contaminant is not caught by the filter, it goes straight into the engine.

This is not the case for filters operating in closed loop systems like lube, transmission, hydraulic and coolant filters. These wet filters get multiple chances at contaminant capture due to the closed circuit multi-pass feature of the system. Particles that miss to be captured on the first pass can be captured at a later-on pass through the filter.

In air filtration, the air passes once through the filter on its way to the engine. The air filter is therefore the only protection against contaminants in the air and it must filter 100% of the pre-combustion air and remove as much contaminant of any and every particle size as it can to a very high final efficiency.

### **Inner filter or safety element**

In dusty conditions it's good practice to safeguard the engine with a safety filter located inside the primary air element. The frequency or number of times the primary needs to be serviced due to the high level of dirt captured increases the risk of dirt being dislodged from around the loaded primary element which can then fall down into the clean side air intake.

The inclusion of the safety element works as a deflection shield, stopping the dislodged dirt from gaining access to the engine when the primary outer element is serviced. It also provides a last line of defense should something catastrophic occur when the engine is running like a dirt loaded primary element ruptured. A safety filter is changed after every 3rd change of the primary.

### **Restriction**

As the air filter progressively removes contaminants, the level of restriction (blockage) increases. As the restriction increases it becomes more difficult for the engine to draw in the air it needs. This leads to a reduction in

power and increased fuel consumption.

### **Filter Minder/Restriction gauge/Restriction Indicator**

Some indicators only register when it is time to change the filter by going immediately from green to red. Advanced ones progressively indicate the air restriction caused by dust and pollution build-up in the filter element over time. They lock up at the highest point of restriction under full engine load and hold the reading even when the engine is shut down. The indicator can easily be released from the setting at any time the engine is shut down and reset again after the filter change.

When indicator specifies that filter needs to be changed, simply install a new element.

### **Types of Contaminants**

Type and amount of contaminant varies with application, as does the type of filtration required.

#### **On-Highway:**

In this kind of environment, the common type of contaminant encountered is exhaust based i.e. carbon and unburned fuel. This type is very harmful; exhaust soot bridges/ blocks pores of the media similar to a coating of black paint (similar also to pores being blocked by chewing gum).

It plugs air filters very quickly and starves the engine of air leading to total collapse of the element and/or media rapture.

On-highway vehicles and some power units working in clean environments due to the low level of dust encountered will see mostly primary or single-stage filtration adapted without the additional safety element.

#### **Off-Highway:**

In mining, construction and farming, there is a considerable amount of contamination present in the air. Many times you can actually "see" the dust swirling around in the air. A good filtration system in these conditions would include a safety filter in addition to the primary element.

#### **Marine:**

Here the environment is mainly salty. Salt spray ingestion is always a danger.

The salt enters as a liquid then crystallizes as it dries. Salt is a very abrasive and corrosive contaminant.

Some air filter elements that are designed specifically for marine application are constructed using non corrosive materials such as stainless steel expanded metal inner wrap or powder surface coatings.

### **Pre-filtration for Moderate to Heavy Dust Environment**

When it comes to stages of filtration, we can refer to the first stage of filtration as that provided by the inclusion of fins on a primary element or fins incorporated into the design of some housings to provide first stage filtration.

As air enters the air cleaner, it passes over vanes or fins which impart a swirling action to the air i.e. centrifugal motion. This swirling or cyclone effect forces the larger particles of contaminants out of the air stream and move into an area of the housing designed to expel it via a rubber dust ejector.

Some housings collect and hold the dust for emptying at regular maintenance checks. The rubber dust ejector has reed-like thin rubber lips that are designed to clamp shut under vacuum created in the air housing during engine running.

At engine shutdown the vacuum in the housing returns to atmospheric and the lips of the ejector will partly open allowing the dust collected to expel by gravity.

The swirling air containing the finer particles of dust is then cleaned as it passes through the primary outer filter.

### **Pre-Cleaners**

The reason for a pre-cleaner is to get longer service life from the air filter. Pre-cleaners work similar to the first stage of a two stage air housing assembly. In other words they apply a spinning air flow pattern to the air.

Centrifugal forces applied to particulate and debris separate the material from the air stream. The material, depending on design of the pre-cleaner, is either collected in a holding chamber or bowl, is ejected or scavenged by the exhaust system.

Some added restriction is placed on the intake but this is well offset by the amount of dirt or other particles that don't make it to the filter.

### **Air filter life is not predictable**

Unlike other filters on the engine, the contamination encountered by air filters is largely in the lap of fate.

Atmospheric conditions are forever changing, dry, wet, dusty, clean, smoky exhaust, e.t.c.

The best way to know when to change an air filter is by use of a filter minder - also known as a restriction gauge or restriction indicator. ■

## Staying afloat Africa's most competitive lubricants market

**W**ith its headquarters in Ilorin, Nigeria, Lubcon International has not only risen to be one of Nigeria's most popular brands but is an award-winning company that has gone on to attain ISO certification. The lubricants manufacturing company with blending plants in Nigeria, Ghana and Ethiopia has a range of lubricant products such as automotive gear oil, synthetic oils, heavy duty diesel engine oils and marine oils among other specialty oils. Kanyingi Kuria sat down with Managing Director, **TAIYE WILLIAMS**, who elaborated, among other factors, how proper leadership and superior expertise tied with innovation are key factors toward market growth and success.

**An interview  
with Taiye  
O. Williams,**

*MD-Lubcon  
International*

### 1. What led you into joining the lubricants industry?

Well, I started off as a chemist working in the pharmaceutical industry. This was just for a while. My entry into the lubricants sector was informed by the need to deal with new challenges.

This was going to come from trying to apply my skills in an industry different from what I had been used to. That is how I ended up in the lubricant sector and here I am with my combined experience totalling 34 years.

### 2. What does your work entail as the MD of Lubcon Nigeria?

I plan and drive the strategy for my company. This is important for constant growth especially now that development of the company is on my laps. I still do some technical work especially having to do with designing new products. Putting out new products into

PHOTO | COURTESY



the market requires proper planning and execution. All those are my responsibilities.

### **How challenging is it and for how long have you been the MD?**

It's very challenging. From what Africa is, it is a very difficult situation trying to offer the best despite challenges of infrastructure deficit facing the industry. I used to say manufacturers should be included among the endangered species of the continent. But I love these challenges. That keeps the weak ones out. I have been the MD for 11 years now.

### **3. What has kept Lubcon Nigeria a success up to date given the presence of other major lubricants in the industry?**

Basically it is just about understanding the market. Secondly, we are always bringing innovation into the market. These have enabled us to stay on top. The Nigerian lubricants market is very competitive.

There are about 51 lubricant manufacturers right now and they are all seeking to win the market. These include multinationals like Total and Shell as well as Independents such as A-Z lubricants, Eterna and Ibeto.

### **4. What does your marketing look like and what's your focus during campaigns?**

The structure of the market is heavily dependent on distributors. We maintain sales offices across Nigeria and several West African countries. We maintain more than 50 other sales outlets in conjunction with Nigeria Automobile Technician Association.

**What do you apply in your advertising: Below the Line (BTL) or Above the Line (ABL) methods?** We prefer an integrated approach now referred to as TTL (through the line) approach. Our products are promoted on radio, television and the print media (ATL), we also use road and trade shows (BTL).

### **5. Lubricants by and large are regarded as sophisticated technical products. Do you think thorough knowledge of a company's employees about the product has anything to do**

### **with the success of the given brand?**

Absolutely! It does because when employees understand the product it is easier to explain it to the customer. It also enables them to come up with quick effective solutions to the problems customers might be bringing forth to you. On the contrary, little or no comprehension of a product makes it difficult altogether.

Both the technical and non-technical staff are trained to interact with customers and, as for the marketing staff, they learn to communicate our values to customers. All employees are ambassadors of the Company's products.

### **6. How would you rate lubricants knowledge in Nigeria right now on the side of customers?**

Most are not well informed enough and are relying on technicians and mechanics. In most cases they may be easily misled. What we are doing to deal with this is education. We are going to decision makers, that is mechanics and technicians, and training them so that in the event that the customers are unaware of what to use, they can advise vehicle owners on the correct lubricants use.

For industrial products however, many user managers are quite knowledgeable. Thus Technical Engineers must be up to date in the knowledge of lubrication needs of different industries.

### **7. Additives technology has driven, to a great extent, the innovation of lubricants. How does an African company-Lubcon and specifically one in Nigeria ensure that lubricants formulated locally keep up with the latest global trends?**

We have technical partners who provide



**We are going to decision makers, that is mechanics and technicians, and training them so that in the event that the customers are unaware of what to use, they can advise vehicle owners on the correct lubricants use**

training to our staff from year to year. Training by our additive providers also ensures that we are up to date with global trends.

We send our staff on regular trainings abroad to ensure they are familiar with global trends in the lubricants industry.

### **8. You have been in the sector for 34 years, long enough for you to be called a master. What's the one challenge that continues to clobber the industry and what can be done to address it?**

Knowledge! Knowledge transcends most challenges including counterfeits, illicit lubricant trade and so on. If only people understood the damages caused by usage of wrong lubricants and at worst low quality lubricants! Knowledge helps in making informed decisions on what lubes to use, how and when to use them. We will keep educating our people. In addition, keeping major brands like ours protected from counterfeits still poses a great challenge in our market. But jointly, blenders are exploring some solutions, coupled with aggressive education of users.

### **9. What do you think is the least explored opportunity when it comes to the Nigerian lubricants market?**

Base oil refining and used oil processing. We currently do not have any refineries providing base oils. Also no nationwide used oil collection system or used oil re-refining. There is a huge opportunity for investment in that.

### **10. To the young minds aspiring to join the lubricants industry, what would you say are the academic qualifications and character traits for them to have a successful lubricants career?**

Chemical Engineering, Chemistry and Engineering will lead you into the industry. That's a prerequisite. But more important is self-education. You need to be someone who believes in lifelong learning. This assures continuous growth in the industry as well as opening up numerous options for you. ■

CREATING AWARENESS

# Tractor lubrication in Kenya



**Mohammed Baraka**

Managing Director,  
Synergy Lubricant  
Solutions Ltd  
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**T**he life and performance of a tractor are greatly affected by maintenance and lubrication. In our major grain production areas where farming is mechanized, there is lack of understanding of the lubricants to use on tractors. The misapplication includes use of lubricants made from recycled base oils, use of counterfeits and use of automotive gear oil SAE 90 or engine oil SAE 40 in the transmissions. These misapplications are negatively impacting on the performance of the tractor and food production in the long run. High maintenance costs as a result of this malpractice also make our farming less profitable thus reducing the money farmers could invest in production activities.

We dealt with the problem of using recycled oils in lubrication in Volume 23 of Lubezine. Use of these unsuitable lubricants is more prevalent in the farming area than in any other sector of our economy.

The widespread use of these lubricants is driven largely by ignorance and the high level of poverty that has been worsened by weather and infection of crops by pests like armyworms.

And yet the use of recycled oil will make the farming in general less profitable and threaten food production. The fact that many farmers are far from urban areas means they are not exposed to and may likely lack knowledge on the difference between lubricants made from recycled base oil and those made from virgin base oils.

Some farmers however notice that use

of lubricants made from recycled base oil results in accelerated thickening, high lubricant consumption that requires frequent top up and bearing failure or total seizure of the piston in the cylinder liner due to restricted flow of lubricants. Many operators and mechanics believe these are routine problems.

In transmission, automotive gear oil SAE 90 is commonly used and sometimes made from recycled base oil. The oil generally thins out as it is sheared by gears during transmission, it foams a lot as a result of water accumulation, which causes the sump, gears and the power takeoff to rust.

The effectiveness and efficiency is compromised due to the recycled base oil containing divergent contaminants that might not be compatible with the EP

additives. Customarily, the recycled base oil has been diluted with automotive gas oil and when the gear temperature rises, smoking occurs.

The recycled gear oil might not have any anti-wear to protect the pump and is mostly too viscous for the pump which makes operation of the hydraulic system, particularly on cold mornings, difficult especially when combined with heavy foam formation.

The lubricants made from recycled base oils are either locally blended or imported as finished lubricants from the Middle East.

The locally blended lubricants are made from locally recycled base oils or imported recycled base oils. As earlier indicated, the recycled base oils are utilized in counterfeiting, where the lubricants 'made' using them are packaged in containers from leading brands.

In one of the meetings with tractor operators, they proposed using top brand lubricants in maintenance, but discovered that after emptying the container, a black layer of material settled at the bottom of the container.

This mishap confirmed that the lubricant used was not a product from multinational manufacturers, but their package was used to repack recycled material and dupe the struggling farmer. To add on the fact that he wasted his money buying counterfeit products, he also put his equipment is at risk.

Using recycled lubricants means more frequent oil change, hence many farmers change oil in one or two weeks contrary to change intervals expected while using high quality lubricants of one or two months depending on the level of operations.

This problem is further compounded by contamination of the fertile agricultural soils by disposing the over-used, degraded used lubricants. This trend in soil pollution poses more risks not only to the soil but also the water bodies with consequent grave impact to human and animal life.

The use of recycled lubricants is not limited to farmers only. Of late, various initiatives by institutions towards improving food security have led to acquisition of tractors for the purpose. Consequent tenders for maintenance materials are mainly driven by low cost which leads to encroaching of the recycled lubricants due to their low cost.

Relatively new technology-based tractors which inherently require latest techno-



logically performing lubricants are rendered vulnerable to this vice. This will negatively impact on not only the tractor, but the vision and livelihood of the population.

The more enlightened tractor owners use engine oils which are API CG-4, CH-4 or CI-4. However in the tractor transmission and hydraulic system they use SAE 90. The viscosity of SAE 90 is higher than that of a universal tractor transmission fluid (UTTO) and is about 2 times more viscous than Super Tractor Oil Universal (STOU). The tractor transmission is designed to use UTTO or STOU.

Use of SAE 90 results in the transmission overheating after prolonged use which makes it difficult to change gears and further very high pressures are generated resulting in seals leaking.

It foams a lot thus trapping water in the foam that condenses at night and settles in the sump resulting in the rusting of gears and hydraulic system.

The product is too viscous for the hydraulic pump which makes operation especially during the cold season difficult and results in premature pump failure.

Tractors are fitted with oil immersed brakes and require an oil with anti-squawk properties. An oil without anti-squawk causes the brakes to make noise (squawking) and reduces the life of the brakes. Gear Oil SAE 90 does not have the anti-squawk properties that UTTO or STOU have so the use of SAE 90 gear oil is not good for the brakes.

The other area of misapplication is use of SAE 40 engine oil in the transmission in tractors. Engine oils do not have extreme pressure properties of API GL-4 level required in tractor transmission.

Use of SAE 40 results in metal to metal contact that makes the gears to wear out very quickly and one notices an accumulation of metal particles tearing from gears in the sump.

Similar to SAE 90 it is more viscous than UTTO and STOU and this results in problems in operation of the hydraulic system while not having anti-squawk properties. In tractor cooling systems, most operators use water either due to lack of knowledge about engine coolant or in the hope of cutting costs.

Water causes rusting and if the water is hard it causes scaling, both phenomenon's resulting in a layer that builds up in the radiator and inhibits the cooling

of the radiator coolant. This results in the radiator overheating and interrupting operations.

The scale and rust can also be deposited in the cylinder head of the engine causing it to expand and contract in an irregular manner that results in the radiator cracking, with the water settling in the sump.

If not diagnosed early, the bearings seize and expensive repairs will be required. Grease used in the farming industry is mainly made from recycled base oils and disintegrates after short usage requiring frequent relubrication.

For Kenya to achieve the dream of food security, we need to mechanize most if

not all food production processes, but mechanization without proper lubrication and maintenance is detrimental to the resources.

There is need for concerted efforts to deal once and for all with the menace of recycled lubricants and aggressive upscaling as recently seen in Tanzania which is bearing fruits. This calls for intervention from KEBS, NEMA, ACCA, Ministry of Water and Ministry of Agriculture, the oil marketing companies and users.

The Ministry of Agriculture with counties departments of Agriculture should effect and oversee training of tractor owners on maintenance and lubrication. ■

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By Kanyingi Kuria

## MARKET PLACE

# Grappling with influx of low quality lubricants in Ghana



Vehicles in a garage yard in Kumasi, Ghana.  
PHOTO | COURTESY

**T**he Republic of Ghana has a growing economic prosperity and democratic political system, features that have made it a regional powerhouse in the continent. Oil Marketers, both global and local, are up for a stake in this thriving economy. Multinational companies such as Total and Shell/Vivo compete against local oil companies such as the state-owned Ghana Oil limited (GOIL), ENI Ghana Petroleum, Galaxy Oil and Star Oil for a slice of the country's lubricants market.

However, with a higher number of players in the lubricants sector, there comes even a wider loophole for illicit trade that has seen genuine Oil Marketers almost lose out on profits. This was confirmed by Alex Adzew, COO, GOIL during his comprehensive presentation on Ghana's current lubricants market scene during the 6th Base Oils and Lubricants Conference held in Accra, Ghana late 2017. According to Adzew's report, there is a whole host of factors influencing the disturbing presence of low-quality lubricants in the market.

Among the factors influencing low quality

lubes is the poor monitoring and control by the relevant inspection and standards agencies, oil marketers' associations and consumer organizations.

In Ghana, as reported by Alex Adzew, there is weak legislation on products that do not meet the set standards. Worse still, the laws around it have a lot of grey areas therefore not in a position to enforce the specific laws.

This directly relates to control. If control of low quality lubes in the market is not being conducted effectively, chances are high that dealers of these low-quality lubes will keep getting away with their illicit practices. The high number of competitors in the market is another contributing factor. This can be a curse or a blessing depending



**Continued and unchecked proliferation of low lubricants not only harms machinery but also drives manufacturers of quality oils out of business.**

on the interpretation. With a ready market, it would seem normal to encourage more players, but the promotion of free market erases the need to be keen on compliance with the already laid out policies.

Lubricants dealers taking advantage of the afore-stated poor monitoring and control will then unleash poor quality lubricants that do not meet any OEM requirements or industry standards.

There is also the issue of low prices. "If all consumers were to be skeptical of any lubricant going for an unreasonably lower price as compared to other competitor brands, the situation would perhaps change," advised Alex. Consumers looking to save on every lubricant purchase fall prey to low quality products at the point of purchase.

The purchase of low quality lubricants is the beginning of the process that leads to demise of the machinery. Luckily, following the high losses that consumers have been making from using low quality oil, the age-old parlance, "cheap is expensive" is steadily gaining currency in the country.

Consumer ignorance has also played a major role in contributing to the growth of low quality oil usage. If a consumer has poor or no knowledge about the product they are purchasing, chances are high that they will go for the product that retails at the lowest price irrespective of its performance levels.

A wrong perception held by many consumers, for example, is that thick oil is the best for modern engines. With time this is changing through the efforts by various Oil Marketing Companies, to educate people about their products with the aim to create performance awareness and loyalty.

Sadly, the continued and unchecked proliferation of low quality oils business not only harms machinery but also drives manufacturers of quality oils out of business. They are forced to limit or stop any investments in the country and eventually close shop much to the detriment of a country's economy. ■



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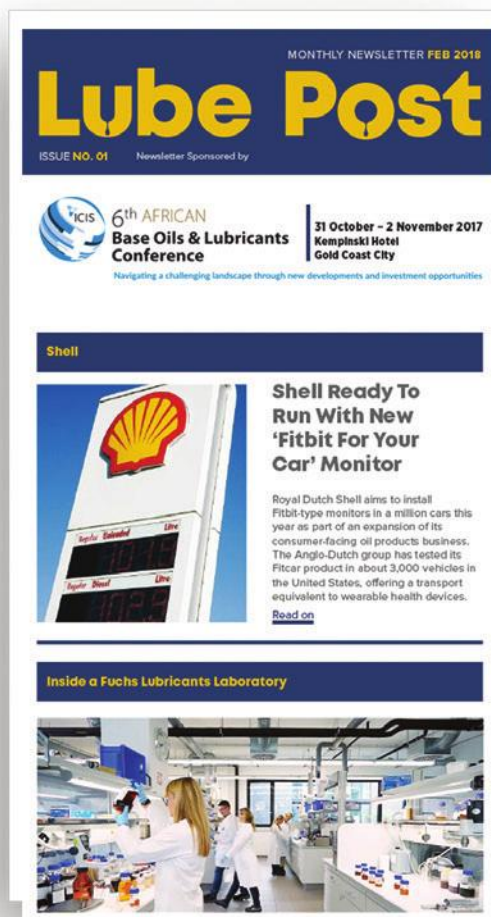
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