



TOTAL

COMMITTED TO BETTER ENERGY



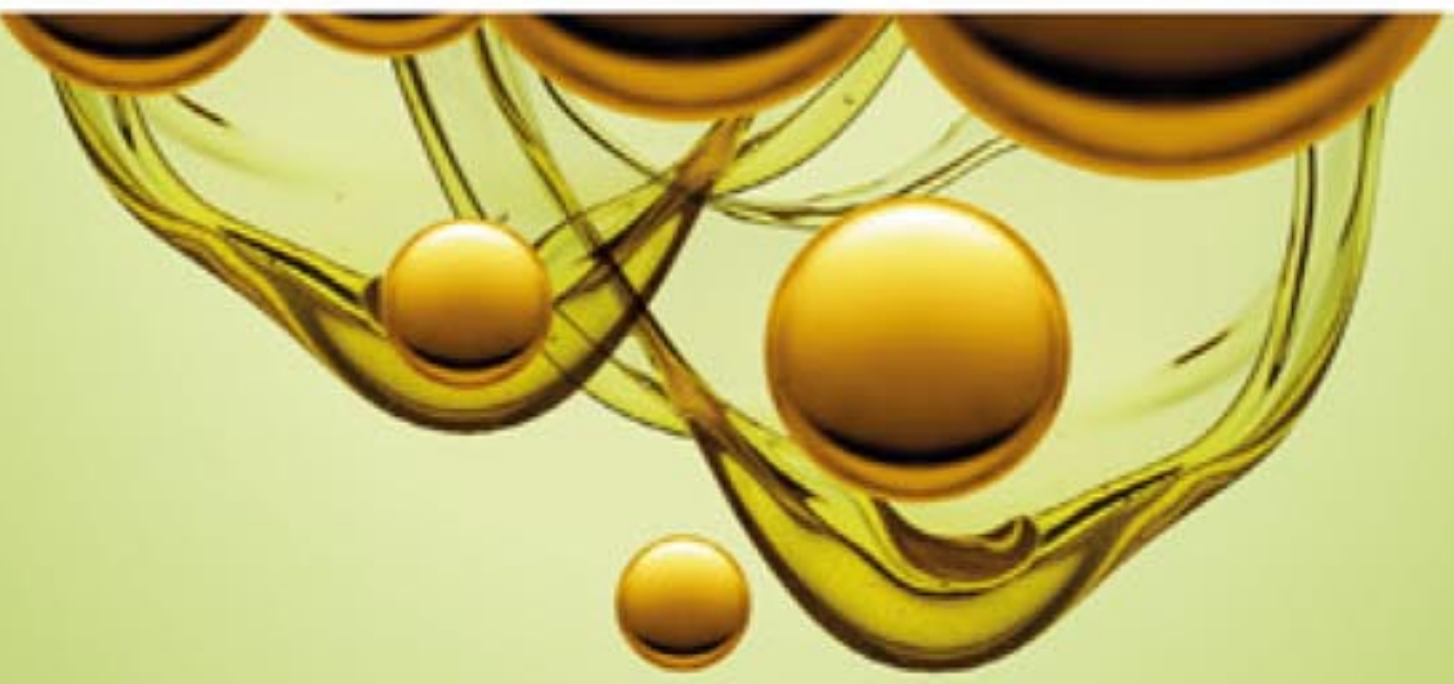
PALM OIL INDUSTRY

Integrated solutions to enhance your productivity

Energizing performance. Every day



**TOTAL
LUBRICANTS**



Lubricants specially designed to your needs and increase your productivity

Palm oil is one of the world's most produced and consumed oils. This cheap, production-efficient and highly stable oil is used in a wide variety of food, cosmetic and hygiene products, and can be used as source for bio-fuel or biodiesel. Most palm oil is produced in Asia, Africa and South America because the trees need warm temperatures, sunshine and plenty of rain in order to maximize production.

Total offers you the most suitable lubrication solution that enables you to operate your heavy equipments in plantations, palm oils mills, kernel mills and refinery plants at the optimized rate, while complying with the most stringent international standards.

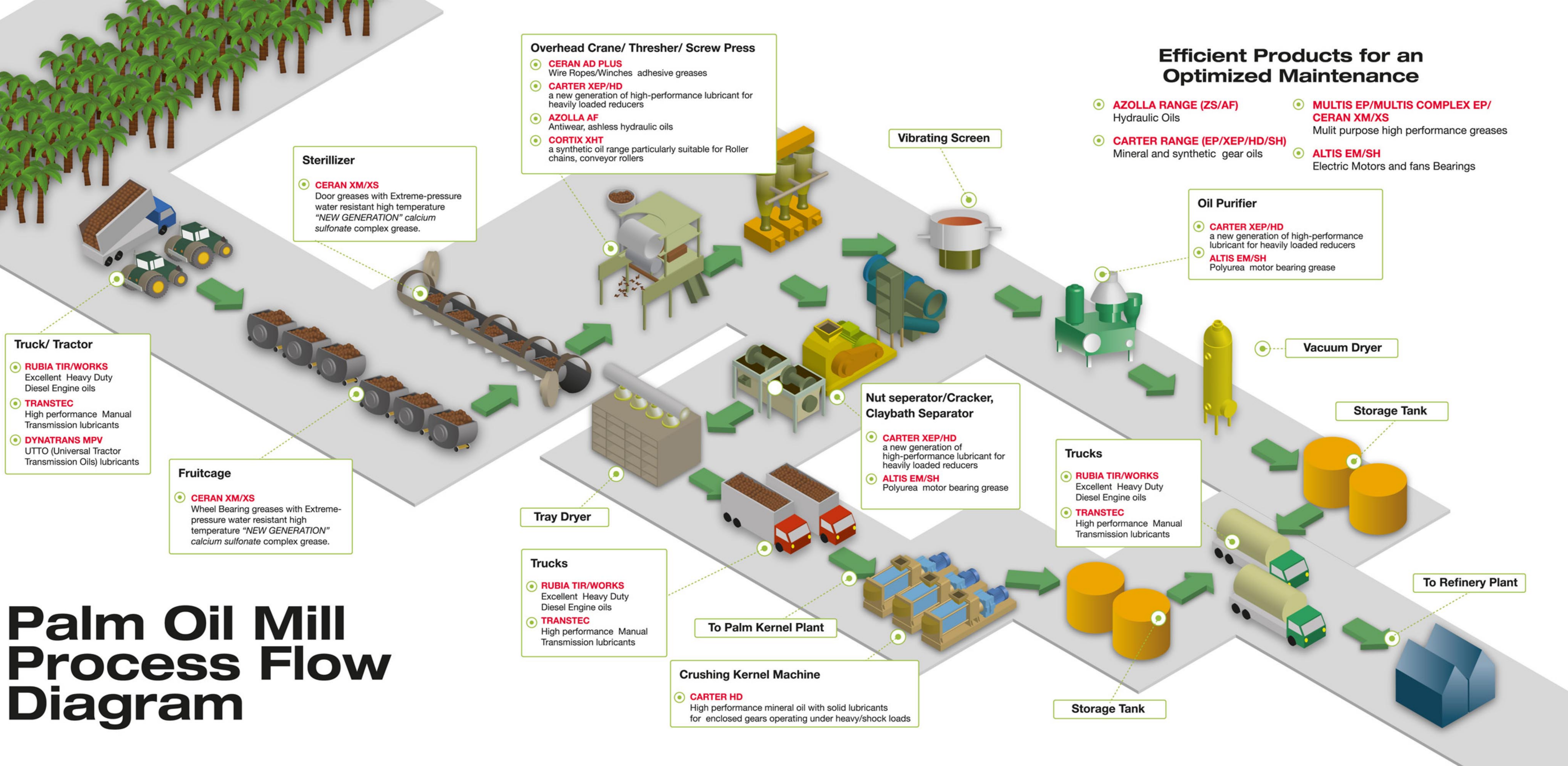


Your benefits

- ✓ Increase equipment reliability and operation performance
- ✓ Reduce operating and maintenance costs
- ✓ Protect your investment over time
- ✓ Enhance worker safety
- ✓ Take advantage of over 80 years experience of Total in Industrial Oils



Palm Oil Mill Process Flow Diagram



3 main applications in refinery process :

Total offers you the most suitable lubrication solution that enables you to operate your refinery process :

- Pre-treatment & Degumming
- Bleaching & Filtration
- Deodorize & Scrubbing

at the optimized rate while complying with the food safety requirements :



NSF H1



Kosher certification



Halal certification

The assurance that the products are :

- ✓ registered NSF H1
- ✓ free of any compound of animal origin
- ✓ GMO free
- ✓ allergen free
- ✓ manufactured in ISO 21469-certified plant

● **CLOSED GEAR BOX**

NEVASTANE XSH

oils are 100% synthetic, based on PAO and recommended for the lubrication of gear reducers, plains and roller bearings with high loads in the food processing industries.

● **HYDRAULIC SYSTEM**

NEVASTANE AW

oils are based on white mineral oil and high performance additives and recommended for any high pressure hydraulic system and/or airline lubricators in the food processing industries.

● **BEARING GREASES**

NEVASTANE XS

is an extreme pressure calcium sulfonate complex grease with white oil/PAO having anti-rust properties, wide operating temperature range and also highly resistant to water wash out.

Utilization Units

GAS ENGINE

NATERIA MJ 40

is biogas engine oil when the engine requires a medium ash oil and its performances are recognised by all major manufacturers who tested it successfully in real conditions.

AIR COMPRESSOR

DACNIS





is mineral oils with a specific high performance additive specially designed to lubricate rotary air compressors (screw, rotary vane, etc.)

HEAT TRANSFER SYSTEM

JARYTHERM®

is a high performance heat transfer fluid catering to a wide range of operating temperature.

Our Solutions

-  Wide array of product and service ranges, meeting the latest international specifications
-  NSF H1 registered food grade products designed for high level of hygiene and food safety required applications particularly in refinery plant
-  Worldwide presence in more than 150 countries
-  Customer service and technical assistance provided by dedicated professional teams

Enhance your competitiveness with our comprehensive range of services



Oil Analyses

ANAC INDUS, especially recommended to monitor rotating machines, can contribute to your operation cost savings. You can:

monitor the mechanical condition of your machinery without shutdown or disassembly

reduce the number of breakdowns and halts in production

extend the service life of your lubricants and components



Maintenance and Lubrication Management IT Solution

TIG 6 is a unique software designed by Total Lubricants that provides all the tools to drive efficiently your maintenance. **TIG 6** enables you to **monitor** closely all your assets data (costs, documents, history etc..) and **manage** the full range of **ANAC** Oil Analyses. It is **fully customizable** to fit your organization. **TIG 6** is specifically fitted for a remote use on the field as it is accessible through any mobile device and **uses** barcodes and RFID labels.



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TOTAL tailor-made Services

Technical advice and assistance: recommend the best suitable products and services for your needs and help solve your problems related to the lubricants

Lubrication audit: optimize your operations and rationalize your lubricants inventories

Best practices for lube handling and storage: reduce losses and save costs

On-site training: improve the knowledge and skills of your operation staff

Waste oil and pack disposal solution: help you comply with environmental regulations

A major player

With our production, supply chain and commercial presence in more than 150 countries, we deliver a full range of lubricants.

Support and partnership

Thanks to local technical presence, we provide a high level of service to optimize your Total Cost of Ownership.

References & OEMs

TOTAL Lubricants cooperates with equipment manufacturers to create high-technology products for optimal performance and protection of your machinery.

5 good reasons for choosing TOTAL

Innovation & Research

TOTAL invests in biotechnologies to find the most suitable components to reach energy efficiency through formulations designed in our Research Centers.

Quality and environment

TOTAL Lubricants ISO 9001 certification is the guarantee of a long term commitment to quality. From the initial design stage, our R&D teams seek to develop products that minimize toxicity risks and environmental impact.

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