

Eni for Agriculture

Growing experience



Lubricants and special products for agricultural and work machinery



oilproducts.eni.com

Eni has developed a complete line of lubricants for agricultural and earthmoving machinery, work vehicles and equipment, meeting the highest performance standards.

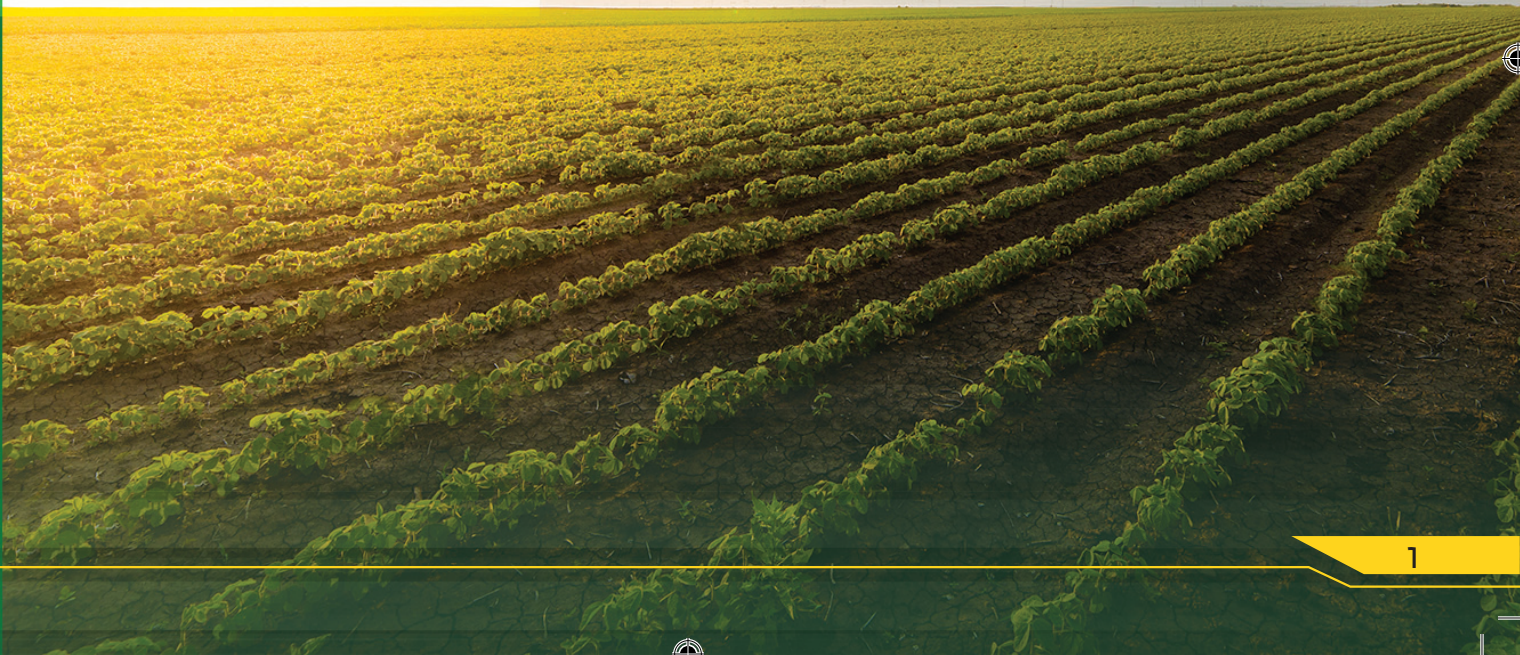
Eni lubricant lines include traditional technology products employing reliable, tried-and-tested formulations, as well as cutting edge technologies suitable for modern vehicles fitted with exhaust gas after treatment systems for reduction of emissions.

A line of lubricants has been specifically designed to provide better fuel economy, top-notch protection in any weather condition, eco-friendliness and long lasting performance.

Eni offers a series of specialized products like multifunctional oils, engine coolants, hydraulic fluids and greases, to meet the needs of the majority of agricultural and work machinery.

The Eni line of products for agricultural and work machinery is a selection of products, aimed at satisfying the most relevant operational requirements. If necessary, the full Eni range of lubricants and special products is available to offer the right solution to any specific need.





ENGINE OILS

A high technology product line, designed to meet all the needs of heavy duty vehicles, and complying with the most stringent performance specifications set by the leading manufacturers. The line also includes lubricants specifically designed for new generation engines fitted with exhaust gas after treatment systems, that require a special additive formulation to keep their effectiveness over time.

- **High performance lubricants** for all heavy duty vehicles and agricultural machinery of the latest generation as well as earlier models, working in severe conditions.
- They offer **top detergent-dispersant** performance and resistance to oxidation, which ensure the maximum protection from wear and sludge deposits for all engine parts.
- They allow **prolonged oil drain intervals**, according to the indications of the vehicle manufacturers.





Eni i-Sigma performance E7
15W-40

Specifications

API CI-4/CH-4/SL
ACEA E7, E3, E5, B3
MB-Approval 228.3
MAN M3275-1
MTU Type 2
Volvo VDS-3
Deutz DQC III-10
Caterpillar ECF-1a, ECF-2
MACK EO-N
Renault RVI RLD-2



Eni i-Sigma performance E4
10W-40

Synthetic technology

Specifications

ACEA E4
MB-Approval 228.5
MAN M 3277, M 3377
MTU Type 3

- Ideal for the most common vehicles
- Engine protection and cleanliness
- Maximum reliability



Eni i-Sigma top MS 15W-40

Synthetic technology

Specifications

API CJ-4/SN
ACEA E7, E9
MB-Approval 228.31
Caterpillar ECF-1a, ECF-2, ECF-3
Cummins CES 20076, 20077, 20081
Deutz DQC III-10 LA
MACK EO-O Premium Plus
MAN M 3575
MTU type 2.1
Renault RVI RLD-3
Volvo VDS-4
Detroit Diesel 93K218



Eni i-Sigma top MS 10W-40

Synthetic technology

Specifications

API CJ-4
ACEA E4, E6, E7, E9
MB-approval 228.51
MTU Type 3.1
Volvo VDS-4
MAN M 3271-1, M 3477, M 3575
MACK EO-O PP
Deutz DQC IV-10 LA
Caterpillar ECF-3
Renault RVI RLD-3
Cummins CES 20081
Detroit Diesel 93K218
JASO DH-2-17
Scania Low Ash



Eni i-Sigma top MS 10W-30

Synthetic technology

Specifications

API CK-4
ACEA E9
MB-Approval 228.31
MAN M 3575
MTU type 2.1
Volvo VDS-4.5
Caterpillar ECF-3
Deutz DQC III-10 LA
Detroit Diesel 93K222
Renault RVI RLD-3
Cummins CES 20086
JASO DH-2
MACK EO-S-4.5



Eni i-Sigma top MS

5W-30

Top-synthetic

Specifications

API CJ-4
ACEA E4, E6, E7, E9
MB-Approval 228.51, 228.31
MTU Type 3.1
MAN M3477, M3677, M 3575, M3271-1
Deutz DQC IV-10 LA
Caterpillar ECF-3
Renault RVI RLD-3
Cummins CES 20081
Detroit Diesel 93K218
Scania Low Ash
Scania LDF-4
Volvo VDS-4
Mack EO-O PP



- Top synthetic
- Top performance
- For the latest-generation engines
- Fuel economy
- Prolonged oil drain intervals

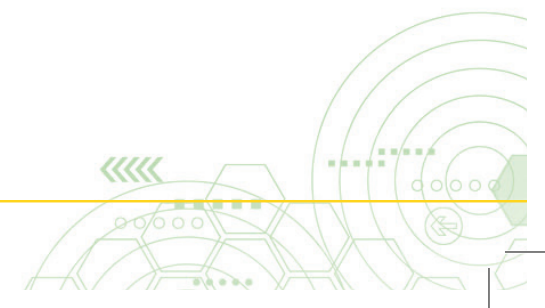


BIO TECH



A **high performance lubricant** formulated with raw materials from renewable sources, suitable for lubrication of Diesel powered commercial vehicles of the latest generation as well as earlier models, working in severe conditions.

Offers top antiwear and detergent performance, which limit the formation of sludge deposits, and a high thermo-oxidative stability. It allows prolonged oil drain intervals, according to the indications of the vehicle manufacturers.





Eni i-Sigma Bio tech

10W-30

Synthetic technology

Specifications

API CI-4

ACEA E4

ACEA E7

MB 228.3

- Bio-based components from renewable sources
- Maximum protection
- Top performance
- For the latest-generation engines
- Fuel economy
- Prolonged oil drain intervals



TRANSMISSION OILS

A specific product line suitable for use in classic transmissions as well as in most modern driveline systems. These products comply with a wide range of performance specifications issued by the leading international organizations and required by the most popular tractors and work machineries operating today.



- **High performance lubricants** for use in manual gearboxes and differentials with hypoid gears, subject to high loads and sliding speed.
- They offer a high thermo-oxidative stability, **protection** against corrosion and a perfect compatibility with seal materials, in order to allow prolonged oil drain intervals, according to the indications of the vehicle manufacturers.
- The choice of the appropriate product is to be made according to **grade and performance** specifications necessary for the vehicle.
- Rotra MP/S has a specific formulation for use in mechanical components with **"Limited Slip" characteristics.**

Eni Rotra MP 75W-90

Synthetic technology

Specifications

API GL-4 + GL-5, MT-1
SAE J2360
MAN 341 Typ Z2
MAN 342 Typ M3
Scania STO 1 : 0
ZF TE-ML 02B, 05A, 12L, 12N
ZF TE-ML 16B, 17B, 19C, 21A

Eni Rotra MP 80W-90

Specifications

API GL-5
MIL-L-2105D
MAN 342 Typ M1
MAN 342 Typ M2
ZF TE-ML 05A, 07A, 08, 12E
ZF TE-ML 16B, 17B, 19B, 21A

Eni Rotra MP/S 80W-90

Specifications

API GL-5
ZF TE-ML 05C, 12C, 16E, 21C

Eni Rotra Truck gear 80W-90

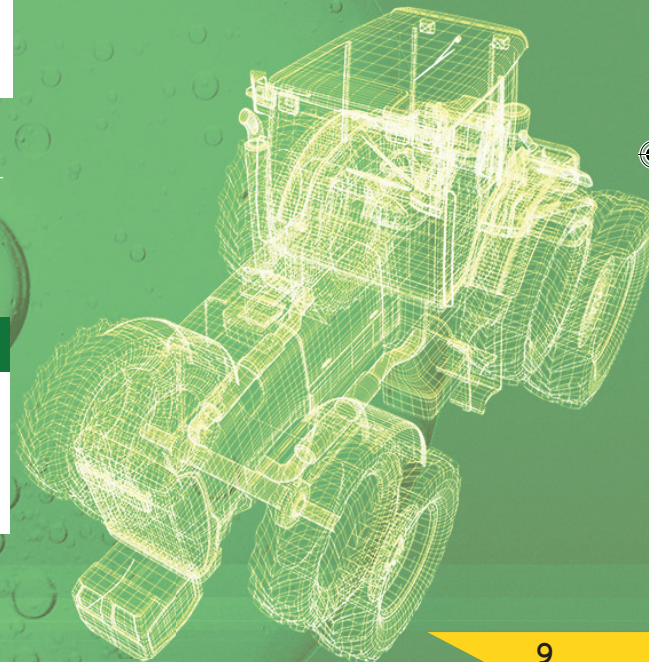
Specifications

API GL-4, GL-5, MT-1
SAE J 2360 (ex MIL-PRF-2105 E)
SCANIA STO 1:0 level
ZF TE-ML 2B, 5A, 7A, 12E, 16B, 17B, 19B, 21A
MAN 341 Typ E2, Z2
MAN 342 Typ M2
NATO O-226

Eni Rotra Truck gear 85W-140

Specifications

API GL-4, GL-5, MT-1
SAE J 2360 (ex MIL-PRF-2105 E)
SCANIA STO 1:0
ZF TE-ML 02B, 5A, 7A, 12E, 16D, 21A



MULTIFUNCTIONAL OILS

Multi-purpose products designed for the lubrication of a wide range of devices fitted on modern tractors and work machinery. They are generally grouped into two categories:

S.T.O.U. (Super Tractor Oil Universal):

Lubricants potentially suitable for use in the engine and in all the auxiliary equipment fitted on the vehicle.

U.T.T.O. (Universal Tractor Transmission Oil):

Lubricants potentially suitable for use in all auxiliary equipment, but not in the engine.



MULTIFUNCTIONAL STOU OILS

Lubricants suitable for use in all onboard devices: engine, transmission, hydraulics, wet brakes, hub reductions, Power Take-Off and power steering gear. They have balanced characteristics which allow them to comply with all the vehicle requirements.



Eni Multitech
10W-30

Specifications

API CG-4/SF
API GL-4
ACEA E2
Allison C-4
Caterpillar TO-2
John Deere JDM J 27
ZF TE-ML 06B, 06C, 07B
Massey Ferguson M 1144-1145
Ford ESN M2C 159-B
MB 228.1
DIN 51524-2 HLP



Eni Multitech
10W-40

Specifications

API CG-4/SF
API GL-4
ACEA E2
Allison C-4
Caterpillar TO-2
MB 228.1
John Deere JDM J 27
ZF TE-ML 06B, 06C, 07B
Massey Ferguson M 1144, 1145
MIL-L-2105 D



Eni Multitech 15W-40

Specifications

API CG-4/SF
API GL-4
ACEA E2
Allison C-4
Caterpillar TO-2
MB 228.1
John Deere JDM J 27
ZF TE-ML 06B, 06C, 07B
Massey Ferguson M 1144, 1145
FENDT VARIO



MULTIFUNCTIONAL UTTO OILS

Lubricants suitable for use in all onboard auxiliary devices: transmission, hydraulics, wet brakes, hub reductions, Power Take-Off and power steering gear, according to the indications of the manufacturer. Specifically suited to prevent squawking and vibrations in wet brakes and clutches.



**Eni Multitech JD/F
10W-30**

Specifications

API GL-4
Caterpillar TO-2
ALLISON C-4
JOHN DEERE JDM J20C
MASSEY FERGUSON M1135, M1141, M1143, 1145
KUBOTA UDT FLUID
KOMATSU (KES 07.866)
CASE New Holland MAT 3525, 3526, 3510
FORD ESN-M2C 86-B, C
FNHA-2-C-201.00, FNHA-2-C-200.00
Volvo VCE WB 101
ZF TE-ML 03E, 05F, 06K, 17E, 21F



**Eni Multitech THT
15W-30**

Specifications

API GL-4
FORD ESN M2C-86B, C
FORD ESN M2C-134 D
MASSEY FERGUSON M 1135-1141- 1143-1145
ALLISON C-4
New Holland FNHA-2C-201.00
ZF TE-ML 03E, 05F, 06K, 17E, 21F



Eni Multitech WB 10W-30

Synthetic technology

Specifications

API GL-4

John Deere JDM J20C, J20D

CNH MAT 3525

Massey Ferguson M1135, M1141, M1143, M1145

Allison C-4

Volvo VCE WB 101

ZF TE-ML 03E, 05F, 06K, 17E



MULTIFUNCTIONAL CATERPILLAR UTTO OILS

Special multifunctional lubricants, specifically designed to meet the TO-4 technical requirements by Caterpillar, which include both anti friction and anti wear performances. They protect Powershift transmissions to ensure optimum performances over all their technical life and at the same time eliminate wet brake chatter. Although not primarily intended for use in the vehicle engine, they offer a CF/CF-2 API level performance, so reducing the risk of damage in case of improper use.



Eni Multitech
CT Plus 10W

Specifications

Caterpillar TO-4
Allison C-4
ZF TE-ML 03C
KOMATSU KES 07.868.1
DANA Powershift transmissions
Eaton Vickers 35VQ-25



Eni Multitech
CT 30

Specifications

Caterpillar TO-4
Allison C-4
ZF TE-ML 03C 07F
KOMATSU KES 07.868.1
DANA Powershift transmissions



Eni Multitech
CT 50

Specifications

Caterpillar TO-4
KOMATSU KES 07.868.1
TREMEC/TTC
Eaton Vickers 35VQ-25

Coolants

Special ethylene glycol-based coolants, recommended for an **outstanding protection** of the cooling circuits fitted on modern tractors and work machinery. The special adopted formulations guarantee **heat exchange efficiency** in the radiator, ensuring safe engine operation even in severe operating conditions. All coolants are environmentally friendly since they are formulated without Nitrites, Amines and Phosphates (N.A.P. free).





Eni Antifreeze Plus

Concentrated, formulated with organic acids and mineral inhibitors (hybrid technology).

Specifications

ASTM D 3306
CUNA NC 956 16 (ed.,12)
MAN 324 NF level
MB 325.0
VW TL 774C



Eni Antifreeze Spezial

Concentrated, formulated with organic corrosion inhibitors (OAT technology).

Specifications

ASTM D 3306
CUNA NC 956 16 (ed.,12)
Ford WSS M97B44 D
MAN 324 type SNF level
MB 325.3
VW TL 774D / F (G12/G12+)



Eni Antifreeze Ready

Prediluted, ready-to-use, formulated with organic acids and mineral inhibitors (hybrid technology).

Specifications

ASTM D 3306
CUNA NC 956 16 (ed.,12)

Hydraulic fluids

Full range lubricants for excellent **hydraulic** and **hydrodynamic performance**.

Available in several lines and viscosity grades, these lubricants match all demands of work and agricultural machinery.

The choice of the fluid depends on the type of use, the operating conditions and the characteristics of the components of the hydraulic system.



Eni Arnica 46

- High viscosity index, antiwear hydraulic oil, formulated with selected base oils and "low zinc" additive technology ensuring excellent thermal, oxidative and hydrolytic stability.
- It is specifically designed to meet the needs of modern mobile equipment hydraulic systems.

Specifications

ISO 11158 HV
DIN 51524-3 HVLP
Fives Cincinnati P-69
Denison HF-0
Rexroth RD 90220-01/12.10

Eni Arnica EAL 46

- "Eco-friendly" high performance hydraulic fluid, complying with the European Ecolabel criteria. It is based on saturated synthetic esters, readily biodegradable and not bio-accumulative.
- It is particularly suitable for hydraulic systems of agricultural machinery operating in a wide temperature range and in environmentally sensitive areas.

Specifications

ISO 15380 HEES

Eni Arnica DV 46

- High viscosity index hydraulic oil, formulated with advanced base oils and a balanced additive system, designed to guarantee outstanding antiwear, antirust and antioxidant properties.
- The effective balance of detergent and dispersant additives makes Eni Arnica DV 46 suitable for all hydraulic systems particularly sensitive to risks of pollution from water and impurities.

Specifications

ISO 11158 HV (not demulsive)
DIN 51523-3 HVLP-D

Eni Eco Lube MS 100

- Biodegradable lubricant formulated with natural quality esters and anti-wear additives. Especially suitable for manual or automatic lubrication of chainsaw chains.



Greases

Eni offers a wide range of greases meeting all application needs. Greases for special applications at extremely low temperatures and heavy loads are also available.



Eni Grease TBM EP 2

- Semi-synthetic, lithium-calcium grease reinforced with high amounts of graphite and molybdenum disulphide.
- Excellent E.P. (Extreme Pressure) properties, adhesiveness, resistance to vibrations, shocks, high loads and water washout, very high antioxidant and antirust properties.
- Recommended for lubrication of agriculture machinery, TBM (Tunnel Boring Machine) bearings, chains, wire ropes, open gears operating at very high loads and in wet environments.
- Operating temperature range: -10 / +150°C.

Specifications

ISO 12924 L-XADHB 2
DIN 51825 KPF 2N-10

Eni Grease LC 2

- Multipurpose mineral-based lithium complex grease with E.P. (Extreme Pressure) additives.
- Recommended for lubrication of agriculture machinery, plain and roller bearings, gears, joints and connections operating in severe conditions, at very high temperatures, exposed to water washout and to high loads and vibrations.
- Operating temperature range: -20 / +150°C.

Specifications

ISO 12924 L-XBDHB 2
DIN 51825 KP 2N -20

Eni Grease Plus 2

- Biodegradable multipurpose E.P. (Extreme Pressure) grease formulated with synthetic esters and calcium anhydrous soap.
- Very high adhesiveness, excellent anticorrosive and water washout resistance properties.
- Recommended for lubrication in sensitive environments, for agriculture and farm machinery, marble cutting, TBM (Tunnel Boring Machines), marine equipment, water treatment plants and components operating in natural reserves.
- "Readily biodegradable" according to the OECD 301 B method.
- Operating temperature range: -30 / +120°C.

Specifications

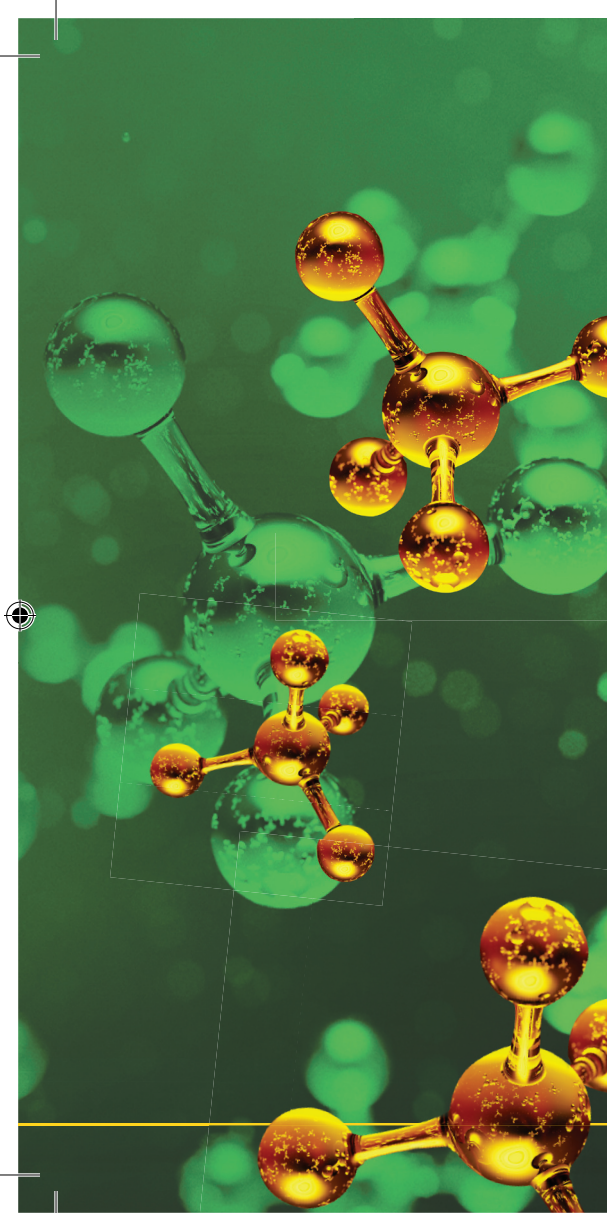
ISO 12924 L-XCCHB 2
DIN 51825 KP 2K -30



How many components are there in a multifunctional oil for agricultural machines and what are they for?

LUBRICANT COMPONENT	ROLE IN THE FINISHED PRODUCT
Base oils	Lubrication and power transfer
Antioxidant	Prolongs fluid life
Viscosity index improver	Expands the temperature operation range of the fluid
Anti-wear	Prevents wear of mechanical parts
Corrosion inhibitor	Prevents corrosion and rust
Friction modifier	Changes the characteristics of internal friction of the lubricant, to ensure proper torque transmission in clutch plates, preventing slipping and vibrations
Dispersant	Avoids the deposit of lacquers and sludge
Pour point improvers	Allow machine operation at low temperatures
Anti seal-swelling agent	Prevents alteration of the rubber that can lead to oil leakage due to an alteration of the seal
Foam inhibitors	Control of foam development
Dyes	Identification of the product





RESEARCH CENTRE

The **Eni** Research Centre in San Donato Milanese has state-of-the-art laboratories featuring advanced equipment for studying, developing and fully identifying the characteristics of raw materials for high performance lubricants. In line with the company's marketing strategies, the **Eni** research involves performing important technical activities in collaboration with important machinery manufacturers, regulatory authorities and several prestigious Italian universities. The **Eni** Research Centre complies with the UNI EN ISO 9001 standard in relation to the activities of "Applied research, technical support and laboratory analyses in the energy sector: lubricants, additives, bitumens, special products for motor vehicles and for industrial use" and "Production on pilot systems of lubricants, propellants and fuels" (sector EA 34,35 - certificate no. 676).

QUALITY

The long time established **Eni Refining & Marketing** Quality Management System obtained the updated UNI EN ISO 9001:2015 certification about commercial and industrial processes covering the whole lubricant and additives industrial cycle and including project design, process development, supplying activities, production operation, blending, packaging and client delivery.

OUR COMMITMENT TO ENSURE CUSTOMER SATISFACTION

The **Eni Refining & Marketing** organization is able to support customers for any need regarding lubrication oils and to consolidate a strong relationship based on integrated technical support services.



Sales assistance

The **Eni** sales network, present on the territory, provides information on the range of lubricating oils and assists customers in all the product procurement phases.



Technical assistance

Eni technicians are available to help solving any operative issue and can provide their assistance to arrange lubrication guides, to follow the oil charge monitoring and to offer training courses regarding lubrication.



Laboratory assistance

The **Eni** laboratories give their full assistance to customers for the oil charge control by periodic monitoring in order to guarantee the best operating efficiency of lubricated machineries.





Eni Refining & Marketing

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oilproducts.eni.com