# CONSTRUCTION & MINING



WOLF LUBRICANTS, BUILDING YOUR BUSINESS TOGETHER

## WOLF OPTIMISES YOUR FLEET UPTIME

A fully functional fleet plays a vital role in the success of an enterprise, and advanced fluid management is key to achieve this. The right innovative lubricants adapted to the market evolutions are capable of extending fleet uptime, directly improving equipment efficiency and reducing operational costs.

Wolf's technologically advanced fluids are designed to improve mobility by enhancing the complete fleet with the latest technological solutions. Our innovative lubricants support the latest heavy-duty evolutions, enabling fleet owners to take full advantage of new opportunities.

### WE COMBAT THE FACTORS WHICH AFFECT ENGINE WEAR

Working in partnership with the industry we know the factors which affect engine wear and pose the most maintenance challenges.



#### DEMANDING MODERN TECHNOLOGY

Modern heavy-duty machinery is equipped with sophisticated and expensive systems to regulate emissions and improve fleet productivity. Advanced maintenance of these innovative systems are key to optimal fleet efficiency.

#### FLEETS WITH MIXED BRANDS AND APPLICATIONS



Worksites contain equipment made by different manufacturers. Fleet maintenance is becoming more complex, making a partner that offers a complete range of premium products even more valuable. This way you can reduce storage and handling costs and prevent errors from occurring during service.



#### **HOT/COLD CLIMATES**

In cold climates, engines must receive specialised protection, otherwise the oil film will fail to prevent the engine parts from wearing down. In hot climates, engine oil needs to preserve its lubricating characteristics to ensure complete wear protection.



#### **IDLING AND HIGH LOADS**

Idling engines receive reduced cooling from the environment, causing excessive heat and engine wear.



#### LOW FUEL QUALITY

Fluctuating fuel quality and sulphur levels in combination with humidity and higher temperatures, can cause acids to form within the engine. These molecules affect the engine components, causing them to break down more quickly.



#### DRAIN INTERVAL

Having to postpone mandatory oil changes due to certain circumstances. Extending the oil drain interval holds the risk of causing premature wear and can increase vehicle downtime.

## YOUR MAINTENANCE, OUR EXPERTISE

We know modern heavy-duty mobility is a harsh environment for both equipment and the fluids used to service them. Our advanced lubricant formulations have been designed to withstand high loads and extreme operational temperatures. They have been developed to boost engine performance, increase uptime, decrease cost of ownership, increase fuel economy and extend equipment lifespan under a range of modern operational conditions.

Our products consist of a sophisticated combination of active ingredients that create complex interactions to ensure our lubricants maintain their properties fully. This allows your equipment to perform more efficiently in the most demanding conditions over an extended period. As a result, Wolf products keep your fleet running hour after hour.

## "NO ONE BLENDS TECHNOLOGY WITH SERVICE LIKE WE DO"

## THE MASTER BLENDERS BEHIND WOLF

The Wolf Oil Corporation is a completely dedicated lubricant specialist. We use our 60 years knowledge and experience in production to provide cutting-edge products set to revolutionise the industry. As lubricants are our speciality their innovation is our total focus and we are constantly striving to create new Wolf product ranges to help maintain vehicles and enhance their performance.

Headquartered in Belgium with branches in France, Germany, the Netherlands and Italy our products are produced with the highest possible quality standards. Our products are sold in over 90 countries wordwide. As such we work with major companies and have a wide range of OEM approvals.

As a leading independent blender of innovative lubricants Wolf Oil Corporation guarantee the highest quality in every step of our production process, giving our customers a unique edge over the competition. We are confident in our claims because we are producing lubricants of the highest quality and the technology which has developed our blends sets us apart.

#### THE WINNING LUBRICANT:

- On site laboratory: a team of experts test each raw component and final product with a set of standardised methods, offering full transparency of our products' quality.
- The highest certification and standards: our quality management system is certified under EN ISO 9001:2015 certification.
- OEM approved products: our longstanding relationship with additive suppliers and OEMs have led to a range of officially approved products.











## AN OVERVIEW OF THE WOLF PRODUCT OFFERING

## **OFFICIALTECH EXTRA RANGE:** ADVANCED LUBRICANTS FOR MODERN ENGINE TECHNOLOGY

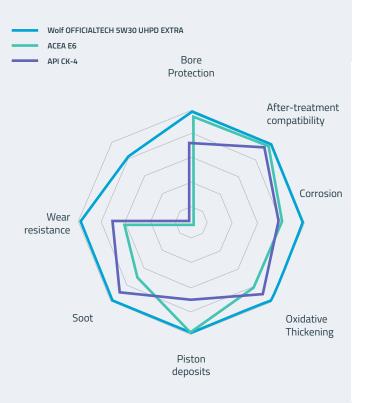
Vehicles equipped with latest emission control systems (to meet EU Stage V/US Tier 5) are running at very high temperatures compared to previous engine designs. We appreciate extra attention must be paid to lubricant oxidation control, aeration control and shear stability of vehicles equipped with these high-tech emission control systems.

The OFFICIALTECH EXTRA products have been designed to outperform the industry standards by offering advanced anti-oxidation, anti-aeration and high shear stability as standard. In addition, the products have been engineered to ensure optimal engine cleanliness, soot handling and wear control. Engines fitted on heavy-duty construction and mining machinery will experience extended longevity by making the best use of the protective properties provided by this product range.

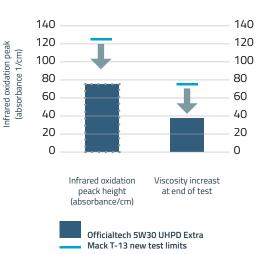
#### HIGHLIGHT: OFFICIALTECH 5W30 UHPD EXTRA

Its formula is innovating the lubricant industry due to the complex molecules inside the oil which have been expertly balanced to increase the lifespan of the lubricant, giving businesses the flexibility to extend oil drain intervals without risk.

The lubricant exceeds the new chemical limits and requirements set by equipment manufacturers, such as Caterpillar C13 aeration test, Mack T-13 oxidation and corrosion limits, reducing wear deriving from air bubbles and oil oxidation. It offers outstanding fuel economy by exceeding the chemical limit for volatility at high operating temperature.



#### OFFICIALTECH 5W30 UHPD EXTRA vs CK-4 Mack T-13 Oxidation Test Result



Our products outperform API CK-4 & ACEA E6 standards and perform beyond what is required by OEM'S.

#### WOLF OFFICIALTECH 5W30 UHPD EXTRA/EXTRA-S



- Fuel economy and power saving: the lubricant offers increased fuel economy and improved engine power savings. The viscosity at low temperature and unique oil chemistry facilitate smooth engine starts in cold weather conditions, ensuring complete component protection throughout the whole work cycle.
- Innovative anti-oxidation formula: higher temperature or heavy-loads puts more stress on lubricants, leading to faster oil oxidation. This lubricant contains a powerful additive package that disrupts the oxidative reactions and prevents the formation of harmful by-products to avoid it ageing prematurely.
- Improved engine cleanliness and wear protection: excellent engine cleanliness
  fewer piston deposits, efficient soot dispersants and sludge control elements
  offer advanced wear protection for the whole engine. This helps to increase the
  lifespan of engines operating in cold-weather due to its powerful protective
  properties. These rejuvenating characteristics make the product the leading
  choice for both engine manufacturers looking for advanced factory filling of
  heavy-duty vehicles and fleets found in mines and guarries.



#### WOLF OFFICIALTECH 10W30 / 15W40 MS EXTRA



- Extend lifespan and preserve performance: the high operating temperature, pressure and oil flow rate in modern engine designs can increase the amount of air entrained in lubricants. Accumulations of tiny air bubbles, known as foam, prevent the oil from efficiently cooling the engine which accelerates wear and reduces overall engine efficiency. The oils have been formulated to eliminate aeration, directly increasing engine lifespan and preserving the original power output.
- **Rejuvenating anti-oxidation formula:** higher operating temperatures put high levels of stress on standard oils, leading to increased oxidation rates. This innovative formula contains advanced additives that disrupt oxidation reactions and prevent the formation of harmful by-products to avoid the premature ageing of the oil.
- Optimise cleanliness and wear control: the formula enables engines to reach their intended lifespan target without sacrificing on engine output. The oil completely protects the moving parts against premature wear. Pistons rings, cylinders, rockers and metal bearings benefit from its deposit removing, soot dispersing and anti-oxidation properties.



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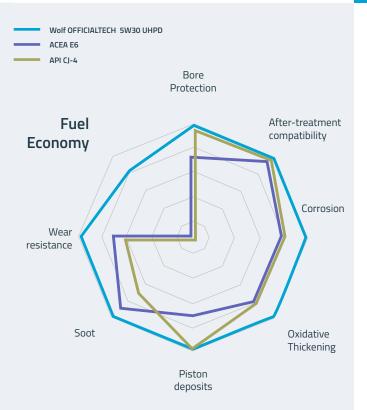
### OFFICIALTECH UHPD / MS PREMIUM HI-TECH LUBRICANTS FOR MODERN ENGINES

This advanced product range has been developed to meet the widest set of OEM specifications. The high levels of protection, optimised fuel efficiency and improved maintenance intervals of the range are the result of Wolf's unbeatable lubricants.

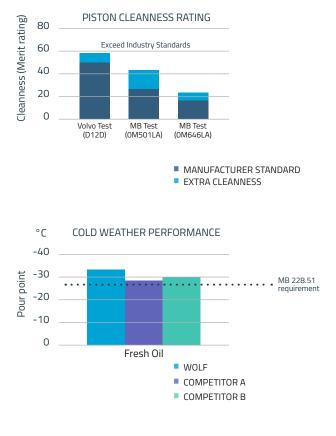
Fleets containing different levels of diesel engine technology, with or without exhaust after-treatment systems, will benefit the most from its unique features; reducing the amount of engine oils required to fully service a fleet. The products' compatibility with engines built following the EU Stage IIIB, IV and US Tier4i and 4 final regulation and their compatibility with older generation emission control systems enable this product range to service a large section of the global market.

#### HIGHLIGHT: OFFICIALTECH 5W30/10W40 UHPD

With regards to cleanliness and wear both products exceed stringent Cummins and MB specifications, even when they are used in applications running on biodiesel. They achieved a 53 merits rating during Scania field test evaluation and a rating of 59 in the Volvo D12D test. Both also offer the best engine cleanliness, sludge deposit control and soot handling of all standard low ash formulations in the market. As a result, critical engine parts like the top ring, cylinder bore, rockers, metal bearings and the after-treatment system receive advanced wear protection. The pour point depressants contained in both products outperform the competitors for highest protection at low temperatures.



Our products outperform API CJ-4 & ACEA E6 standards and perform beyond what is required by OEM'S.



#### WOLF OFFICIALTECH 5W30 UHPD



#### WOLF OFFICIALTECH 10W40 UHPD / 10W40 UHPD S



- Fuel economy and optimised engine output: the lubricant offers high fuel economy and preserves the original engine output. Its advanced viscosity at low temperatures and oil chemistry improve startability, directly improving wear protection in cold weather.
- Absolute engine cleanliness and wear protection: outstanding component cleanliness is obtained through reducing the amount of piston deposits and increasing the soot dispersing properties. The result is optimal wear protection of all engine componentry and optimised engine lifespan of vehicles working in the quarrying and mining industries.



- Engine cleanliness and wear control: the fluid supports engines to reach their anticipated lifespan target whilst maintaining optimal power output. The innovative formula prevents premature wear from occurring critical moving parts, like pistons rings and cylinders, rockers and metal bearing through excellent deposit removal. In addition, it offers excellent soot dispersion and advanced oxidation protection.
- Engine performance and extended lifespan: it protects equipment against cylinder bore wear and reduces the amount of blow-by pressure through preserving optimal valve functionality. Well-maintained valves keep the engine output stable and is vital for the vehicle lifespan.



#### WOLF OFFICIALTECH 10W30 MS / 15W40 MS

This Low SAPS heavy-duty engine oil **ensures complete fleet protection** when used with low-sulphur fuels, including vehicles fitted with emission control systems. The soot handling and corrosion resistance capabilities allow engines to reach their anticipated lifespan, even when they serviced with previous-generation 15W40 engine oils.



## WOLF ECOTECH AND VITALTECH RANGE TOP QUALITY FOR TOUGH JOBS

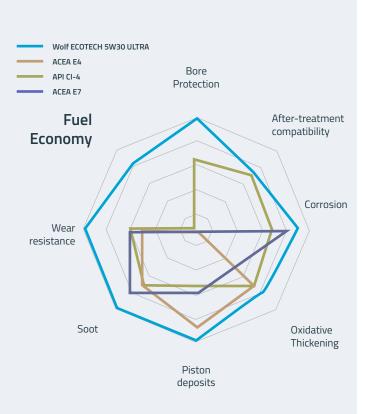
The ECOTECH and VITALTECH product ranges give fleet the resistance to overcome the challenges created by modern mobility. The high-quality formulations contained within these ranges protect all engine components against threats like high acidity and heavy loads.

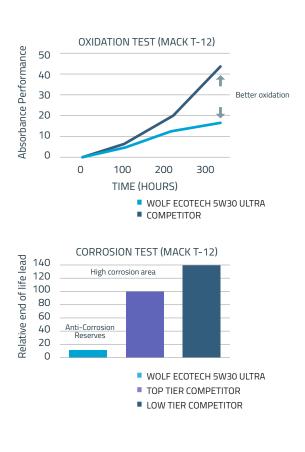
The powerful additive packages, containing the highest TBN values in the industry, neutralise acid and sulphur particles present in fuel. These potent heavy-duty diesel engine oils comply to the EU Stage I/II/ IIIA and US Tier1/Tier2/ Tier3 regulations.

#### HIGHLIGHT: WOLF ECOTECH 5W30 ULTRA

High levels of corrosion can cause catastrophic engine seizure, resulting in an expensive rebuild. This fluid protects the engine against oxidation, prevents the formation of weak acids and keeps metal surfaces of engine componentry from corroding. Its Total Base Number-Alkalinity of 15,4, resulting in a highly protective double TBN reserve at the end of oil change interval, turns this innovative oil into a market leading solution in terms of acidity neutralisation. Its unique composition enables vehicles to stay fully operational when running on fuels containing a high amount of sulphur.

The product maintains its lubricating properties at high engine loads, high temperatures and during cold start thanks to its high viscosity index of 165 and low -45 pour point, outperforming the stringent MB 228.5 requirements.





#### WOLF ECOTECH 5W30 ULTRA



WOLF VITALTECH 10W40 ULTRA



- **Fuel economy and engine output:** the lubricant's wear reducing properties and low viscosity lowers fuel consumption and improves engine power savings. In addition, its low viscosity facilitates smooth cold starting.
- Oxidation and corrosion control: the product includes the highest anticorrosion and oxidation control in the range, proven by its double TBN reserves, which makes it a premium choice for mining and quarrying machinery. Its high resistance to harsh conditions improves oil drain interval flexibility and offers improved protection against sulphur content.
- Improved cold start properties: its low viscosity and pour point keep this innovative engine oil fully operational where other oils fail to facilitate cold starting at low temperatures.



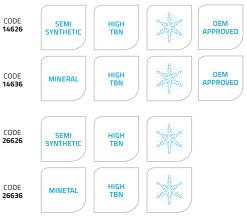
- **High temperature stability:** this oil rapidly reaches the turbocharger, and efficiently cools and lubricates the bearings. Its ability to stabilise temperature help to retain its protective properties in hot and cold operational conditions. The oil retains its excellent flow capacity at low temperatures and retains its molecular structure when into contact with biodiesel.
- Oxidation and corrosion control: this product's high base number and resistance to deterioration allow fleet owners to be more flexible with vehicle drain intervals. It maintains the desired power output by proactively protecting all critical engine parts.



#### WOLF VITALTECH 10W40/15W40 10W40 EXTRA /15W40 EXTRA



- Cummins officially adopted formula, the best choice to ensure durability & long life of the precious engines fitted on mining machines. the combination of Cummins & Caterpillar requirement in addition to other key brands such as Deutz, Volvo... offer the necessary performance in soot handling, wear and deposit control as well as corrosion. Ideal choice for engines not fitted with engine aftertreatment systems in construction & mining fleets
- The VITALTECH EXTRA products offer the highest TBN base number in the industry for ultimate engine protection at the most harsh working condition & degraded fuel quality.





### WOLF AROW HYDRAULICS RANGE, ADVANCED FLUIDITY REACTIVE AND POWERFUL HYDRAULICS

Mining and quarrying machines operate under demanding conditions. The highly-protective fluids found in this product range offer advanced protection against its main challenges: extreme temperatures, water seepage and the ingression of dust.

The formulations are balanced to keep the hydraulic application and fluid itself in optimal condition, extending the lifespan of both equipment and fluid. They provide excellent oxidation stability, as demonstrated during TOST testing, outstanding pump protection and excellent varnish control. Extended duration validation bench and actual pump tests have proven that the solutions excel at filterability.

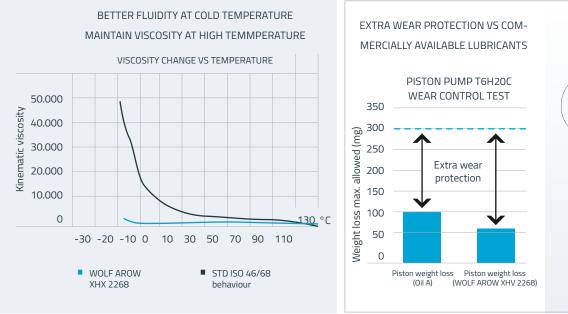
#### HIGHLIGHT: WOLF AROW XHV 2268

This technologically advanced product ensures excellent piston pump wear control, protecting yellow metal interfaces against scoring, polishing, abrasion and adhesion. Furthermore, it has shown excellent varnish control properties in extended length pump tests. It has very good filterability, both in bench and actual pump tests, and advanced resistance to oxidation as proven during TOST testing. The product exceeds the requirements set by major hydraulic componentry manufacturers and successfully passed the FZG 12 gear load test, used to evaluate high levels of lubrication and wear protection properties.

This product is a great solution for heavy-duty machinery due to its ability to retain its properties over a wide range of operational temperatures. Thanks to its high viscosity index (> 185) it retains all protective properties in both cold operational conditions, as well as in heavily loaded hydraulic systems where pressure and temperature are high. It also offers adaptive viscosity in accordance with the operating temperature, which results in noticeable fuel economy gains, energy savings and reduced amount of leakages in hydraulic circuits operating at high temperatures.

FZG 12 Gear load

testing



PRODUCT 12 OFFERING

#### WOLF AROW XHV ISO 2268



**WOLF AROW** 

**HVLPD ISO 46** 

- Fuel economy: these industrial lubricants offer stable viscosity to different types of hydraulic systems. The rejuvenating properties of the Series enable fleet owners to cut down on fuel costs by improving fleet efficiency, regardless of operational conditions.
- Minimise hydraulic circuit internal leakages: heavy-duty machinery with hydraulic circuits benefit greatly from fluids with stable viscosity over a wide range of temperatures. The viscosity index of over 185 guarantees that the hydraulic oil will have the right fluidity at the right temperature. The results include outstanding wear control and minimized hydraulic losses from tolerances in hydraulic components.
- Oxidative stability and increased lifespan: oil stability is paramount in hydraulic systems. The results of its Turbine Oil Stability Test (TOST), show the improved resistance against high operating temperatures and superior stability over an extended period. The gear wear resistance is ensured as this oil passed the FZG gear load test. As a result, the oil could be used for longer drain intervals when correctly monitored.



- Water resistance: high temperature fluctuation and water condensation which are endured by off-road and construction machinery can only be avoided by using high-end hydraulic fluids. The water dispersing properties of this product in combination with its excellent filterability is perfect for hydraulic circuits that need to operate in wet conditions.
- Oxidation, sludge and corrosion control: sludge deposits, if not treated correctly, can cause a range of different problems in hydraulic circuits and tight oil passages. This product has the right detergency and anti-deposit formation properties to keep the hydraulic system clean and to resist corrosion. The result is wear and oxidation free machinery, enhancing the overall lifespan of the fleet.

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#### WOLF AROW HV ISO 22, 32, 46, 68, 100

- Oil stability and circuit cleanliness: this product is a high viscosity index paraffinic oil specifically intended for use in hydraulic circuits. It offers advanced hydraulic system cleanliness by reducing the formation of deposits. The product also demonstrates good filterability, water separation and efficient air release.
- Excellent wear protection: hydraulic circuits and gears benefit greatly from this product's capability to retain its wear reducing properties during heavyload operations. Passing FZG level 10, the products guarantee adequate wear protection, resulting in extended component life, higher machine availability and decreased equipment downtime.

Aclassic mineral based lubricant that meets the requirements for wear protection,

oxidation stability, corrosion and aeration set by major hydraulic component

manufacturers. It is available in ISO 22, 32, 46, 68, 100.



#### WOLF AROW ISO 22, 32, 46, 68, 100





### WOLF TRACTOFLUID COMPREHENSIVE TRANSMISSION AND DRIVELINE LUBRICANTS (TDTO)

Fluids formulated to service different applications within one vehicle offer a range of unique benefits to fleet owners. The versatility of these oils reduce the complexity of maintaining different vehicles within a fleet.

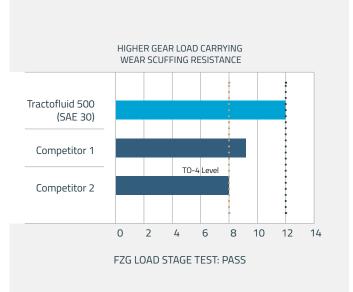
These oils are carefully balanced and blended to exceed the high requirements set by major mining and construction equipment manufacturers, such as the stringent TO-4 and TES-439 requirements.

The unique combination of excellent friction reduction, wear and gear protection, preservation of sealing material and the compatibility with yellow metal will keep the whole drive train in optimal condition. These rejuvenating advantages will enhance the daily working experience of the fleet, resulting in: precision control, smooth operation, reduced shocks, increased equipment lifespan and reduced fleet downtime.

#### HIGHLIGHT: WOLF TRACTOFLUID 500

TO-4 is the industry standard for powershift transmission and driveline oils, however, this oil surpasses it in durability, protection and machine control. This offers a range of benefits:

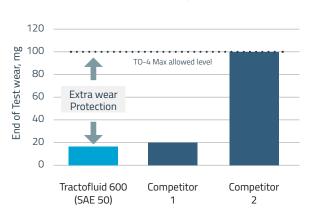
- Superior wear protection and increased load-carrying capacity - directly increasing component lifespan.
- Industry-leading friction reducing properties balancing high control precision, smooth gear shifting and operational comfort. the oil achieves this by preventing transmission clutch slippage, heat spots, loss of power and vibrations from occurring.
- Outstanding yellow metal protection: these metals are widely used in construction and mining machinery such as bronze thrust washers, sintered bronze discs, oil coolers and hydraulics.



#### EXTRA LOAD RESITANCE

#### HIGHER DURABILITY FOR LONGER LIFE SPAN

FZG 20HRS LOW-SPEED WEAR (ASTM D4998). MG



#### WOLF TRACTOFLUID 500 (SAE 30)



#### WOLF TRACTOFLUID 600 (SAE 50)



- Excellent gear wear protection and load carrying capacity: the main load carrying and scuffing test (FZG 12) highlighted the product outperformed the standard TO-4 requirements. Furthermore, it meets Allison's latest specification, TES-439, proving excellent transmission line durability and wear resistance.
- Optimised transmission clutch friction coefficient: this innovative product ensures ideal clutch engagement without slippage, heat sports, glazing or loss of power. The result is vibration-and shock-free mobility as well as improved clutch and friction plate lifespan.
- Advanced yellow metal protection: this safeguards bronze, brass and lead components such as bronze thrust washers, sintered bronze discs, oil coolers and hydraulics found in construction and mining equipment.



- Excellent gear wear protection and load carrying capacity: axles, final drives and wet brake systems benefit greatly from this product's high wear resistance. Even the most challenging low-speed high-torque conditions can't keep this oil from providing advanced protection. Bulldozers, wheel loaders and mining shovels operate frequently under these demanding conditions, making this TO-4 (SAE 50) base formula an ideal choice.
- Optimised friction properties: this product ensures smooth clutch engagement without slippage, heat spots or performance loss in critical applications such as wet brake. Furthermore, it is engineered to increase friction plate lifespan and a minimise noise and vibrations.



#### WOLF TDTO SAE 10W



- Full synthetic lubricant for optimal cold weather protection: covering a wide application range, this TO-4 based formula excels in cold weather conditions. Systems requiring an ISO 32 viscosity grade such as hydraulics, power shift transmissions and clutch brakes will retain their operational efficiency when serviced.
- Energy saving and fuel economy: the fluidity at cold temperatures increases engine efficiency without ever sacrificing protection.





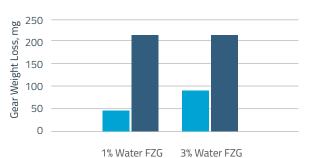
### WOLF TRACTOFLUID COMPREHENSIVE TRANSMISSION AND DRIVELINE LUBRICATION (UTTO)

**Wolf Tractofluid 50~400:** These UTTO versatile products can be used to service multiple applications within one vehicle, drastically reducing the complexity of fleet maintenance. The formulations offer complete protection of axles, hydraulic circuits and transmission systems of heavy-duty off-road applications. Each product holds unique advantages to comply and complement the needs of heavy-duty machinery operating at different jobsites.

#### HIGHLIGHT: WOLF TRACTOFLUID 100/170/170BM/400

Servicing a broad range of vehicles of different manufacturer approvals is a complex task made easier with this product. A service of transmission systems, axles, wet brakes and hydraulic systems can be undertaken by using one advanced lubricant. Whether it is material handling equipment, construction machines or tractors operating in harsh working conditions, the lubricant has the right properties to service them all. The extended oxidative and thermal stability of the fluid prevents oil thickening and formation of harmful acidic deposits. The formulation also contains optimised friction additives and dual wear control systems.

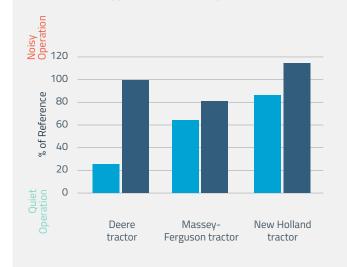
#### FZG GEAR WEAR PERFORMANCE WITH WATER IN FLUID



Proven wear control systemOptimized friction in clutches and brakes

Proven scuffing resistanceProven pitting resistance

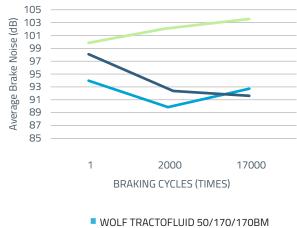
• Axle load performance



FEATURES: EXCEPTIONAL FRICTION PERFORMANCE

COMPARATIVE BREAK CHATTER

BRAKING NOISE & WEAR TEST



TOP TIER COMPETITOR

LOWER TIER COMPETITOR

#### WOLF TRACTOFLUID 50



Full synthetic UTTO formula for axles with wet brakes: anti-oxidation and anti-friction are the core benefits of this premium synthetic oil. Earthmoving machinery as well as supportive equipment require advanced coverage of axles equipped with wet brakes and their hydraulic systems. This product fulfils the requirements for oxidation, clutch friction, brake noise reduction and viscosity index; enabling improved brake performance over an extended temperature range. System cleanliness, detergency and water resistance properties make this product suitable for hydraulic systems where ISO 32 and 46 are recommended and where water condensation is a concern. Due to its viscosity level and low pour point, this lubricant offers fuel saving while keeping its fluidity at cold operating temperatures



#### WOLF TRACTOFLUID 100/170/170BM/400



- Optimised friction system this provides excellent lock-up and holding capacity
  of clutches in transmission and power take-off (PTO) systems. It helps suppress
  brake noise and enhances the braking capacity for safe stopping within the
  design limits of the equipment.
- **Robust oxidative and thermal stability** this prevents oil thickening and formation of harmful acidic deposits, which provide protection for critical components and ensures a reduced risk of seal leakage.
- **Dual wear system** helping to protect spur gears, helical gears, spiral bevel gears and bearings.





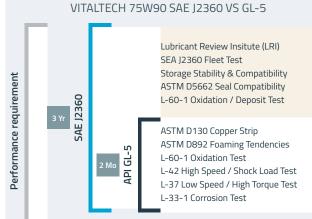




### WOLF VITALTECH, OFFICIALTECH AND EXTENDTECH

Axle gears operate in extreme conditions and oils used to lubricate them have to offer complete protection against strain, sudden increases in temperature and heavy shocks. Wolf oil's innovative gear and axle oils surpass the widespread baseline lubricants in the market, exceeding GL-5 specifications. The top products within these three advanced product ranges meet stringent specifications like SAE J2360.

The benefits include: extreme pressure control, oxidation control, seal compatibility, resistance to ageing, gear cleanliness and heat stability – which make these oils a premium choice for construction machinery. The products offer increased equipment durability, reduction in downtime whilst optimising power output and equipment lifetime.



Performance category

#### HIGHLIGHT: WOLF VITALTECH 75W90 AND OFFICIALTECH 80W90 LS

#### WOLF OFFICIALTECH 80W90 LS GL-5

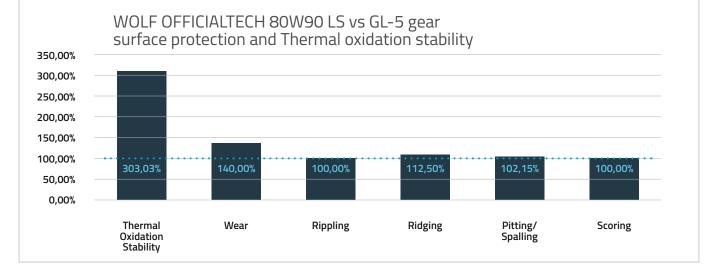
This powerful gear oil with limited slip differential axles (LSD) properties has been acknowledged by various equipment manufacturers. its formulation exceeds the standard GL-5 specification in thermal oxidation, guaranteeing stable viscosity throughout the complete oil change interval. This results in better gear surface protection against pitting, scoring, rippling and wear.

#### WOLF VITALTECH 75W90 GL-5

For fleets in need of advanced protection this lubricant provides full synthetic technology. Its oxidative stability offers complete protection to the most heavily loaded axles, differentials and in both hydrostatic and mechanical drive systems.

#### WOLF OFFICIALTECH 75W90 GL5

This is a full synthetic lubricant based on highquality PAO base oils. It offers advanced protection of all components, even when operating under high-speed/shock-load or low-speed/high-torque conditions. The SAE J2360 specification displays this lubricant's outstanding quality.



#### WOLF VITALTECH 75W90 /75W90 GL5 AND80W90 GL-5



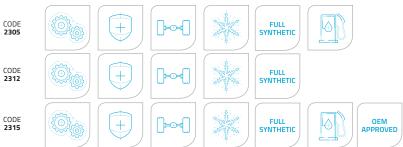
WOLF OFFICIALTECH

80W90 LS GL-5 and

**OFFICIALTECH** 

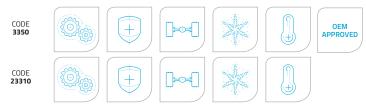
85W90 M GL-5

This premium synthetic gear oil meets the SAE J2360 specification, surpassing the API GL-5 specification with its protective formulation. It has been designed to service the most heavily loaded axles, differentials and both hydrostatic and mechanical drive systems. It offers oxidative stability, seal compatibility and by preventing deposits from settling it keeps these valuable pieces of equipment in prime condition. VITALTECH 75W90 combines low viscosity and an extremely low pour point of -48°C with an outstanding viscosity index of 203. In addition, it offers the highest wear and pitting protection. Heavy-duty machinery operating in cold conditions will benefit the most from this gear oil's advanced set of properties.



Both products are engineered to exceed the required level of gear surface care and provide complete axle protection. OFFICIALTECH 80W90 LS GL 5 contains dedicated lubrication technology for axles fitted with limited slip differentials (LSD). The products enjoy wide recognisance by equipment builders and their level of quality redefines the global performance standard.

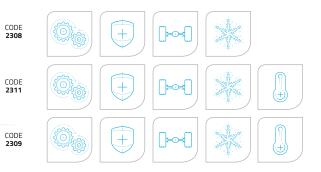
- Formulation with high shear stability and oxidation resistance.
- Exceeds GL-5 gear surface protection, offering complete protection against pitting, scoring, rippling and wear.
- The product has excellent sealing properties, keeping the oil in the axle to ensure efficient lubrication of gears, bearings and seals.



#### WOLF EXTENDTECH 80W90, 80W140, 85W140 GL-5



- Extreme-pressure lubricants for gear boxes, specifically formulated to satisfy the highest service conditions such as: high speed, shock loads and high torque at low speeds.
- A heavy-duty formula recommended for loaded hypoid gears in transmissions and axles. It also is suitable for spiral bevel gears, worm wheels and most transaxles.
- Wear protection and excellent fluidity at low temperatures due to its low pour point.





## GREASES

The unique properties of greases make them the ideal partners of liquid lubricants to guarantee complete and efficient lubrication of heavy-duty off-road vehicles. Elasticity, tackiness and heat stability; every grease has its own specific properties and applications. A wide range of equipment benefit from the innovative properties of the greases contained within the Wolf product range.



#### WOLF MULTIPURPOSE GREASE 2

PRODUCT CODE 9100

Lubricating grease for general applications. It is water resistant and has good temperature properties. It stays pumpable at low temperatures making it suitable for bearing lubrication.



#### WOLF MULTIPURPOSE GREASE 3

PRODUCT CODE 9103

Lubricating grease for general applications. It has good oxidation stability and corrosion protection. It provides temperature protection within a certain range and can be used in wet environment.



#### WOLF LITHIUM GREASE EP 3

PRODUCT CODE 9115

This is a grease with high-pressure properties, for heavily loaded applications. This grease has a good oxidation stability and anti-wear properties. It can ensure long-lasting lubrication.



#### **WOLF LITHIUM GREASE EP 2**

PRODUCT CODE 9130

This is a lithium thickened lubricating grease. it contains antioxidants, corrosion inhibitors and EP/AW additives. It is a typical multipurpose EP grease that can be used in various applications.



#### **WOLF LITHIUM COMPLEX EP 2**

PRODUCT CODE 9141

Lithium-Complex grease with "Extreme Pressure" additives without lead, especially developed for the lubrication of roller bearings of vehicles.



#### WOLF CALCIUM LITHIUM EP2 HEAVY

PRODUCT CODE 9183

This is a lithium calcium thickened grease. It contains antioxidants, corrosion inhibitors and EP/AW additives.



## **RADIATOR ANTI-FREEZE AND COOLANTS**

Wolf coolants disperse the heat generated inside heavy-duty vehicles in an efficient way. The coolants in this advanced product range are compatible with different types of sealing materials, covering a wide spectrum of different applications. The low pour point of the coolants enable them to stay fluid and efficiently cool the systems in cold operational conditions.



#### WOLF ANTI-FREEZE STANDARD G11

#### PRODUCT CODE 50000

An ethylene glycol based antifreeze. It is nitrite, amine and phosphate free and includes borate and silicate. It contains Inorganic Acid inhibitor (IAT) offering permanent cooling system protection.



#### WOLF ANTI-FREEZE LONGLIFE G12+

PRODUCT CODE 50001

An ethylene glycol based antifreeze. It is nitrite, amine, phosphate, borate and silicate free. It contains Organic Acid inhibitor Technology (OAT) offering permanent cooling system protection.



#### WOLF ANTI-FREEZE LONGLIFE G13

#### PRODUCT CODE 50002

An ethylene glycol/glycerine based antifreeze.It is nitrite, amine, phosphate and borate free and contains silicates. The Hybrid Organic Acid inhibitor (HOAT) offers permanent system protection.



#### WOLF COOLANT -36°C STANDARD G11

#### PRODUCT CODE 50100

An ethylene glycol based coolant. It is nitrite, amine and phosphate free and includes borate and silicate. It contains Inorganic Acid inhibitor (IAT) offering permanent cooling system protection.



#### WOLF COOLANT-36°C LONGLIFE G12+

PRODUCT CODE 50101

An ethylene glycol based coolant.It is nitrite, amine, phosphate, borate and silicate free. It contains Organic Acid inhibitor (OAT) offering permanent cooling system protection.



#### WOLF COOLANT -36°C LONGLIFE G13

#### PRODUCT CODE 50102

An ethylene glycol/glycerine based coolant.It is nitrite, amine, phosphate and borate free and contains silicates. The Hybrid Organic Acid inhibitor (HOAT) offers permanent system protection.

#### ENGINE OILS

PRODUCT NAME		OFFI- CIALTECH 5W30 UHPD EXTRA	OFFI- CIALTECH 5W30 UHPD EXTRA S	OFFI- CIALTECH 10W30 MS EXTRA	OFFI- CIALTECH 15W40 MS EXTRA	OFFI- CIALTECH 5W30 UHPD	OFFI- CIALTECH 10W30 MS	OFFI- CIALTECH 10W40 UHPD	OFFI- CIALTECH 10W40 UHPD S	OFFI- CIALTECH 10W40 ULTRA MS	OFFI- CIALTECH 15W40 MS	ECOTECH 5W30 ULTRA
PRODUCT CO	DDE	65622	65626	15755	15757	65613	15725	15726	15706	65603	15736	1215
GRADE	GRADE		5W30	10W30	15W40	5W30	10W30	10W40	10W40	10W40	15W40	5W30
energy	API	СК-4	СК-4	CK-4	CK-4	CJ-4	CJ-4	CJ-4	CJ-4	CI-4	CJ-4	CI-4
ACEA	ACEA	E4-16, E6-16 E7-16, E9-16	E6-16, E7-16 E9-16	E9-16	E9-16	E4-16, E6-16 E7-16, E9-16	E7-12 E9-12	E4-16, E6-16 E7-16, E9-16	E6-16, E7-16 E9-16	E6-16, E7-16 E9-16	E7-12 E9-12	E4-16 E7/16
	JASO	DH-2-17		DH-2	DH-2			DH-1 DH-2		DH-2	DH-2	
cummins	CUMMINS	CES 20081 CES 20086	CES 20081 CES 20086	CES 20086	CES 20086	CES 20081	CES 20081	CES 20081	CES 20081	CES 20076 CES 20077	CES 20081	CES 20077
	DEUTZ	DQC IV-10 LA	DQC IV-10 LA	DQC-III-10 LA	DQC-III-10 LA	DQC IV-10 LA	DQC-III-10 LA	DQC IV-10 LA	DQC IV-10 LA	DQC IV-10 LA	DQC-III-10 LA	DQC IV-10
CAT	CAT	ECF-3	ECF-3	ECF-3	ECF-3	ECF-3	ECF-3	ECF-3	ECF-3		ECF-3	
VOLVO	VOLVO	VDS-4.5	VDS-4.5	VDS-4.5	VDS-4.5	VDS-3 VDS-4	VDS-4.5	VDS-3 VDS-4	VDS-4	VDS-3	VDS-4	VDS-3
Mercedes-Benz	MB	228.51	228.51 228.31	228.31	228.31	228.51 228.31	228.31	228.51 228.31	228.51 228.31	228.51	228.31	228.5
mtu	мти	3.1	3.1	2.1	2.1	2.1 3.1	2.1	2.1 3.1	3.1	3.1	2.1	3
MAEK	МАСК	EO-S 4.5	EO-S 4.5	EO-S 4.5	EO-S 4.5	EO-N PP EO-O PP	EO-N PP EO-O PP	EO-N PP EO-O PP	EO-O PP	EO-N	EO-O PP	EO-N
RENAULT	RENAULT	RLD-4	RLD-4	RLD-4	RLD-4	RLD-2 RLD-3	RLD-2 RLD-3	RLD-2 RLD-3	RLD-3	RLD-2 RXD	RLD-3	RLD-2 RXD
MAN	MAN	M3575 M3677	M3477			M3575 M3677	M3575	M3575	M3271-1 M3477	M3271-1 M3477	M3575	M3277
	DETROIT DIESEL	DFS 93K218 DFS 93K222	DFS 93K222	DFS 93K222	DFS 93K222	DFS 93K218		DFS 93K218	93K218		DFS 93K218	
<b>SCANIA</b>	SCANIA	LDF-4	LDF-4			LDF-4		LA	LA			LDF-3
	Allison	-	-	-	-	-	-	-	-	-	-	

EXTENDTECH 15W40	VITALTECH 10W40 ULTRA	VITALTECH 10W40	VITALTECH 10W40 EXTRA	VITALTECH 15W40	VITALTECH 15W40 EXTRA	GUARDTECH 15W40 SHPD	GUARDTECH 20W50 SHPD	GUARDTECH 15W40 CF-4	GUARDTECH 20W50 CF-4	GUARDTECH SAE 40 CF-4/ SG	GUARDTECH SAE 50 CF-4/ SG
13536	1227	14626	26626	14636	26636	1236	1247	11236	11247	21204	21205
15W40	10W40	10W40	10W40	15W40	15W40	15W40	20W50	15W40	20W50	SAE 40	SAE 50
CH4/SJ	CI-4	CI-4	CI-4	CI-4	CI-4	CG-4/SJ	CG-4/SJ	CF-4/SG	CF-4/SG	CF-4/SG	CF-4/SG
E5 A3/B4-10	E4-16 E7/16	E7-16	E7-08 Issue 2	E7-16 B4-12	E7-08 Issue 2	E3-96 (4) A3/B4-08	E3-96 (4) A3/B4-08				
		DH-1	DH-1	DH-1	DH-1						
CES 20076 CES 20077	CES 20077 CES 20078	CES 20077 CES 20078	CES 20077 CES 20078	CES 20077 CES 20078	CES 20077 CES 20078						
DQC II-05	DQC-III-10	DQC-III-10	DQC-III-10	DQC-III-10	DQC-III-10						
ECF-1a		ECF-2		ECF-1a ECF-2	ECF-1a ECF-2			T0-2	T0-2		
VDS-2	VDS-3	VDS-3	VDS-3	VDS-3	VDS-3	VDS-2	VDS-2	VDS	VDS		
228.3 229.1	228.5	228.3 229.1	228.3 229.1	228.3 229.1	228.3 229.1	228.3 229.1	228.3 229.1	227.1	227.1	227	227
2	3	2	2	2	2	2	2				
EO-M P	EO-N	EO-M P EO-N	EO-M P EO-N	EO-M P EO-N	EO-M P EO-N P	EO-L	EO-L				
RD-2	RLD-2 RXD	RLD RLD-2	RLD RLD-2	RLD RLD-2	RLD RLD-2						
M3275-1	M3277	M3275-1	M3275-1	M3275-1	M3275-1	M3275-1	M3275-1	271	271		
		93K215	93K215	93K215	93K215						
С4					C4	C4	C4	C4	C4		

#### HYDRAULIC

PRODUCT NAME	WOLF AROW XHV 2268	WOLF AROW HVLPD ISO 46	WOLF AROW HV ISO 22	WOLF AROW HV ISO 32	WOLF AROW HV ISO 46	WOLF AROW HV ISO 68	WOLF AROW HV ISO 100	WOLF AROW ISO 22	WOLF AROW ISO 32	WOLF AROW ISO 46	WOLF AROW ISO 68	WOLF AROW ISO 100
PRODUCT CODE	3301	4426	4404	4405	4406	4407	4408	4004	4005	4006	4007	4008
GRADE		ISO 46	ISO 22	ISO 32	ISO 46	ISO 68	ISO 100	ISO 22	ISO 32	ISO 46	ISO 68	ISO 100
ISO	11158, HV / 6743-4 HV		11158, HV / 6743-4 HV	11158, HM / 6743-4, HM								
DIN	13357 T1,T2 / 51524 Part 3	51524 T3 HVLPD	51524 Part 3	51524 Part 2								
AFNOR	NF E 48-603 HV, NF E 48- 690/691		NF E 48-603 HV, NF E 48- 690/691	NF E 48-603 HM, NF E 48- 690/691								
CINCIN- NATI	MACHINE P-70 (ISO 46)			MACHINE P-68 (ISO 32)	MACHINE P-70 (ISO 46)	Machine P-69 (ISO 68)			MACHINE P-68 (ISO 32)	MACHINE P-70 (ISO 46)	MACHINE P-69 (ISO 68)	
DENISON	HF-2		HF-2									
EATON VICKERS	l-286-S, M-2950-S		l-286-S, M-2950-S									

#### TRACTOFLUID TDTO GROUP

#### TRACTOFLUID UTTO GROUP

PRODUCT NAME	TRACTOFLUID 500	TRACTOFLUID 600	WOLF TDTO SAE 10W	PRODUCT NAME	Tractofluid 50	TRACTOFLUID 100	TRACTOFLUID 170	TRACTOFLUID 170BM	TRACTOFLUID 400
PRODUCT CODE	3123	3124	3125	PRODUCT CODE	3119	3120	3121	23121	3122
GRADE	SAE 30	SAE 50	SAE 10W	API	GL-4	GL-4	GL-4	GL-4	GL-4
				ISO/DIN	DIN 51524 T3 HVLPD				
API	CF	CF		ALLISON		С3	C4	C4	C4
				ZF			03E, 05F, 17E	03E, 05F, 17E, 21F	05E
ΑΡΙ	GL-4	GL-4		САТ		TO-2	TO-2	T0-2	
				јсв		SPEC HYD FLUID			
ISO	100	220	32	VOLVO	97304 WB-102			WB-101	
CAT	TO-4	TO-4	TO-4	CASE MAT	3505, 3525, 3526 MS1206, MS1207, MS1209	IH HY-TRAN B6, PLUS MS1204, MS1207, MS1209, MS1210	3505 3525	3505, 3525, MS1206 MS1207, MS1210	MS1205, MS1206
Komatsu	KES 07.868.1	KES 07.868.1	KES 07.868.1	John Deere	J20 D		J20 C J20 D	J20 C J20D	
ALLISON	TES-439	54	54	AGCO/ALLIS	821 XL				
ALLISON	15-439	439 C4 C4	L4	Massey	M 1143 M 1145	M 1110 M 1141	M 1127 M 1129A	M 1135 M 1143	M 1135
ZF	03C, 07D, 07F		03C	ferguson NH	NH 410B NH 410C		M 1143 NH 410B	M 1145	NH 420A

#### GEAR & AXLE OILS

PRODUCT	ΓΝΑΜΕ	WOLF OFFICIALTECH 75W90 GL5	WOLF VITALT- ECH 75W90 GL 5	WOLF EXTENDTECH 75W90 GL 5	WOLF OFFICIALTECH 80W90 LS GL 5	WOLF VITALT- ECH 80W90 GL 5	WOLF EXTENDTECH 80W90 GL 5	WOLF GUARDTECH 80W90 GL 4	WOLF EXTENDTECH 80W140 GL5	WOLF OFFICIALTECH 85W90 M GL 5	WOLF EXTENDTECH 85W140 GL 5
PRODUC	T CODE	2315	2305	2209	3350	2312	2308	2208	2311	23310	2309
GRA	DE	75W90	75W90	75W90	80W90	80W90	80W90	80W90	80W140	85W90	85W140
energy	API	GL5 MT-1	GL5	GL5	GL5	GL5	GL5	GL4	GL5	GL5	GL5
INTERNATIONAL	SAE	J2360	J2360			J2360					
Æ	ZF	02B, 05A, 12L, 12N, 16F, 17B, 19C, 21A	05B, 07A, 08, 11B, 12L, 12N, 16F, 17B, 21B		05C, 07A, 08, 12C, 21C	05A, 07A, 08, 12E, 12L, 12M, 16B, 16C, 16D, 17B, 19B, 21A	05A, 07A, 12E, 16B, 16C, 17B, 19B		05A, 07A, 12E, 16B, 16C, 16D, 17B, 19B	07A, 16B, 16C, 16D, 17B, 19B, 21A	05A, 07A, 12E, 17B, 19B
MIL	MIL-L		2105E	2105D		2105E	2105C, 2105D	2105	2105C, 2105D	2105D	2105C, 2105D
MAN	MAN	342 S1, 341 Z2	341E3, 341Z2, 342M3			341E2, 341Z2, 342M2	341E2, 341Z2, 342M1, 342M2		342M1, 342M2	342M-1	
Mercedes Benz	MB	235.8	235.8			235.0				235.0	
VOLVO	VOLVO	97312	97312							97310 97316	

## LET US HELP YOU FIND YOUR UNBEATABLE LUBRICANT

The Wolf product website www.wolflubes.com provides more product information and advice to help fleet owners find the right advanced fluid for each application. It includes a number of features:

- A product recommendation tool which will match the right product for the maintenance job within seconds. Printed materials can also be ordered from the site.
- The Wolf fleet management tool will also highlight the optimal mix of products with detailed recommendations for tailored fleet lubrication.
- Access to our sales team who are focused on helping our partners solve maintenance challenges and access to our knowledge centre to improve your daily lubrication experience. Expert advisers are accessible to answer all lubricant questions and offers on-site assistance when needed.
- The opportunity to request in-depth technical training and gain access to our **Oil Analysis Program** which tests oil samples from fleet vehicles at an independent laboratory. These samples provide vital information on the performance and health status of vehicles which enables us to give tailor-made advice help fleet owners to schedule maintenance proactively.

#### Contact our sales representative for any further information or advice to find your unbeatable lubricant.



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