

NanoXD

Extended Performance NANOPOLISHER LUBRICATION

- NanoXD is a patented (non-toxic) Nanopolisher with revolutionary chemical technology to apply metal polishing at the molecular level.
- It is the only ISN (In-Situ Nanopolishing) product in the market, polishing and removing the engine friction while the engine is running in the vehicle.
- It's recommended for all sealed mechanical gear systems, engine, turbine or bearing.
- A highly advanced technology makes all current lubricant additive packages obsolete.
- NanoXD® works by forming a protective graphene coating and spherical nanopolishing particles, inside your engine or transmission as it operates
- NanoXD technology is a revolution in lubrication that PERMANENTLY REMOVES the source of all friction in engines – the asperities on the surfaces of machined metal parts. As asperities are removed from the surface of the metal parts, huge increases in fuel economy and power/torque are realized, along with drastic reductions (>90% max.) in harmful carbon emissions and increased reliability and longevity of equipment. With atomic-level perfection of engine parts, no harmful excessive hot spots are created, meaning engines stay perfectly clean (without engine sludge) for hundreds of thousands of miles!

Advantages:

- FUEL ECONOMY – Increase 15% to 25% on mpg
- TORQUE – Improve torque
- HORSEPOWER - Improve true HP capacity. Lower RPM
- EFFICIENCY - Increase overall engine efficiency with less engine breakdown.
- LONGEVITY – Increase the engine life cycle

Decreases:

- HEAT BUILDUP – Reduces the build-up generated by heat and friction
- EMISSIONS - Reduces emissions and eliminate need of high-efficient catalyzers.
- NOISE - Quickly reduces engine noises caused by un-tuned engines.
- VIBRATIONS – Reduces engine vibration, which are quickly noticeable on median and large engines.

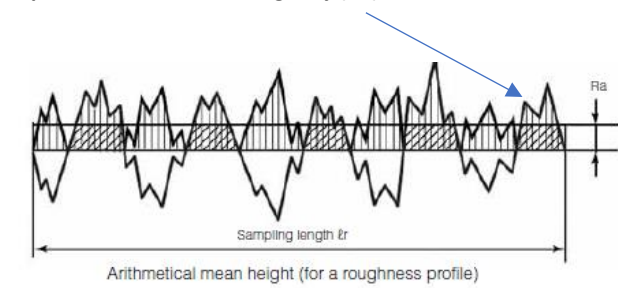
Increase Your Fleet Return on Investment:

- Lower your cost of Fuel 15% to 25%
- Lower your cost of emission controls
- Lower your losses due to engine breakdown maintenance costs.
- Reduce demand to discipline drivers running idle engine or high RPM.
- Increase your revenue by increasing availability of vehicle (low downtime).
- Increase overall Net Profit by 20% when calculated on cost per miles.
- Increase sales value of truck.

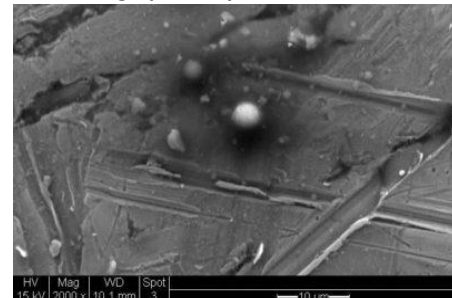
How it works

- Nanopolisher works by forming the 21st Century wonder material Graphene (in situ) on the surface of the metal parts and then patented spherical nanopolishing particles from the heat generated by friction in your engine or transmission.
- Once formed, these “Phantasmene” nanopolishing balls cut through the rough surface imperfections on the metal parts and polish them to atomic-level perfection ($R_a = <4 \text{ nm}$, $RMS = <5 \text{ nm}$, recorded 99% elimination of asperities), trapping metal wear particles in the center of each new nano-sized sphere they create.
- The image below depicts the roughness level (R_a) of a surface, which is imperceptible to human eyes and touch:

Graphic of Metal Surface Rugosity (R_a)



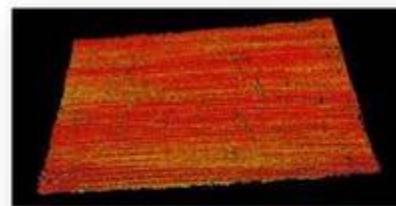
Picture of graphene sphere over metal surface:



- As the Nanopolisher cuts through the rough surface, the roughness level (R_a) is reduced, see the test below where initial $R_a = 221.6 \text{ nm}$ and has been polished to $R_a = 3.4 \text{ nm}$.



BEFORE ($R_a = 221.6 \text{ nm}$)



AFTER ($R_a = 3.4 \text{ nm}$)

- The formed Nanocarbon spheres then remain permanently coating the surfaces of the parts, preventing future metal-to-metal contact. These NanoCarbon sphere are made of the hardest substance known to mankind (Graphene Oxide) and are harder than diamond.
- NanoXD technology is a revolution in lubrication that PERMANENTLY REMOVES the source of all friction in engines – the asperities on the surfaces of machined metal parts. As asperities are removed from the surface of the metal parts, huge increases in fuel economy and power/torque are realized, along with drastic reductions (>90% max.) in harmful carbon emissions and increased reliability and longevity of equipment. With atomic-level perfection of engine parts, no harmful excessive hot spots are created, meaning engines stay perfectly clean (without engine sludge) for hundreds of thousands of miles!

- Recent real-world testing of Freightliner Class 8 (OTR) semi trucks showed between 21.5% and 22.9% gains in fuel economy. These tests were done over 1,200 mile and 3,700 mile evaluation legs through 14 U.S. states.



- This engine and oil pan below had 220,000 miles on it when we inspected them . . .

Truck Engine:

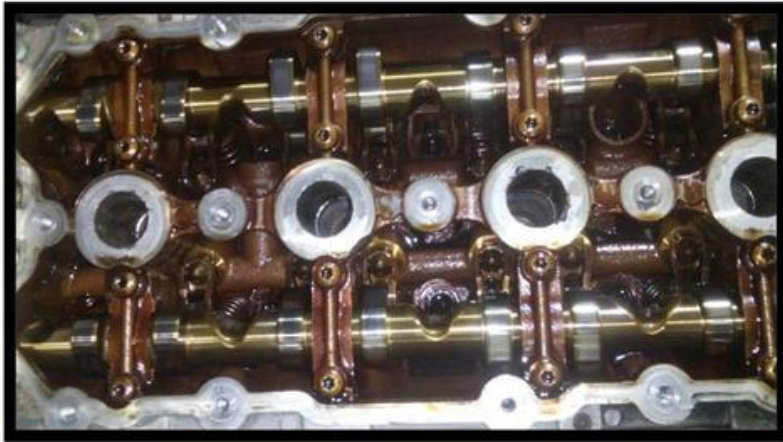


Image of Oil Pan:



- Other motor oil's EP/AW additives that attempt to coat surfaces cannot eliminate friction, only providing limited improvements.
- NanoXD is fully compatible with all lubricants and current additives and its use will not void any manufacturer warranty.

Instructions

1. Applying Nanopolisher at every oil replacement of Engine, Transmission and Differential.
 - Nanopolisher may be added to either manual or automatic transmissions, for gasoline or diesel engines.
 - For the first time use:
 - Be sure to note the current engine sound and RPM at idle engine.
 - During regular oil change, first pour the regular oil in the transmission at the regular expected level – do not overfill above the threshold mark.
 - There is no longer need to use premium synthetic oil, since Nanopolisher will reduce the dirt, aging, and loss of oil life.
 - Based on the regular oil engine capacity, pour 10% of that volume of Nanopolisher.
 - There is no concern to fill-up above the recommended full mark.
 - Leave your hood up and turn on the engine
 - In the course of two minutes:
 - Slowly and steadily apply pressure to the gas pedal, raising the RPM up to 75% of the engine maximum.
 - Remain of for 5 seconds at 75% of RPM maximum
 - In the course of two more minutes:
 - Slowly bring the RPM back down to 50%
 - Slowly bring the RPM back down to 25%
 - Slowly bring the RPM back down to idle.
 - For the first time use:
 - Be sure to notice the new and smother engine sound and lower RPM at idle engine.
2. Applying Nanopolisher in the Transmission
 - Nanopolisher may be added to either manual or automatic transmissions.
 - During transmission oil change, first pour the regular oil in the transmission at the regular expected level – do not overfill above the threshold mark.
 - Based on the regular oil capacity, pour 10% of that volume of Nanopolisher.
 - For automobile → Pour 3 - 4 oz down the transmission dipstick tube or via the fill plug.
 - For Class 7,8 (semi) trucks → add 1/2 gallon (1.9 Litter) of Nanopolisher to the transmission.
3. Applying Nanopolisher in the Differential
 - Nanopolisher may be added to the differential
 - During regular oil change, first pour the regular oil in the differential – do not overfill above the threshold mark.
 - Based on the regular oil capacity, pour 10% of that volume of Nanopolisher.
4. Apply the Lubricant along with every grease replenishment
 - Nanopolisher can be mixed in a 1:9 (10%) ratio into any bearing grease.
 - Simply stir the liquid into the grease thoroughly, then apply as usual to the bearing surfaces.

FAQ

1. How the Nanopolisher Reacts in the engine?

- NanoXD's ISN technology is designed to polish the asperities away (over time) to near atomic-level perfection.
- NanoXD works by forming chemically reacting with the engine's metal residuals generated by friction in the engine and transmission. Turning the residual metal into Graphene (in situ) in form of spherical nanopolishing particles.
- The nanopolishing particles are known as "Phantasmene", acting as nanopolishing balls which cut through the rough surface imperfections on the metal parts and polish them to atomic-level perfection (Ra = <4 nm, RMS = <5 nm, recorded 99% elimination of asperities), trapping metal wear particles in the center of each new nano-sized sphere they create.
- The formed "Phantasmene" spheres then remain permanent in the surface of the parts, preventing future metal-to-metal contact. These nano-ball bearings are made of the hardest substance known to mankind (Graphene Oxide) and are harder than diamond.
- A brand-new engine metal has an average Ra (asperity ratio) of more than 200nm. In laboratory and road tests of engine parts from an automobile using NanoXD, the measured Ra value was reduced from more than 200nm to 3.4 nm. This is significant, as this value represents a 99% removal of asperities and an over 1,000% improvement in surface smoothness! These levels of performance for a lubricant additive have never been achieved since man started forging metal.
- NanoXD active ingredients are made to be consumed in the chemical reactions necessary to synthesize the nanopolishing spheres that remove the friction from your engine. As such, the liquid in NanoXD will disappear slowly over time in your engine's motor oil. This is normal, considering that NanoXD need only be used ONCE during the lifetime of your engine

2. How do I know that the claims for this product are legitimate?

- NanoXD's ISN technology received patent based on proof of technology and it's currently used by US government agencies for military purpose.
- NanoXD technology has been tested in controlled environment and also it's already in use in real-world environment, running on engines on different types of vehicles:
 - Automobile → running for more the 20,000 miles
 - Stock Car Racing → Used on all vehicles on regulated Stock Car Racing competition.
 - Long-Haul Trucks → Used by trucks such as Freightliner Class 8 (OTR) with interstate routes.
- As stated by Exxon Lubricant Specialist:
"Incredible results "even" if I hadn't experienced over 10% improvement on my first tank of gas after one treatment in my Acura NSX. This product will revolutionize lube technology. In my 34-year career with Exxon International, I never saw anything even close, and one of my assignments was International Lubricants and Specialties Manager." By W. DAVID MCCOY – former Exxon Lubricant Specialist June 16, 2016

3. Are there references already published about this technology?

Below is a list of important researches or technical publications related to NanoCarbon use in as NanoPolisher for Engine:

- Use of graphene as oil lubricant
 - <http://www.tribonet.org/in-situ-nanopolishing-isn-a-new-lubrication-paradigm-aimed-at-permanent-surface-perfection/>
- Argonne – American Institute for the Research of Energy and Transport
 - <https://www.anl.gov/article/argonne-discovery-yields-selfhealing-diamondlike-carbon>
 - <https://www.tribonet.org/argonne-embraces-concept-of-in-operando-formation-of-carbon-based-tribofilms/>
- US Department of Energy agreement with Argonne
 - <https://www.energy.gov/articles/energy-department-selects-argonne-national-laboratory-lead-us-consortium-new-cerc-medium>
- The use of NanoCarbon spheres “dots” in metal
 - <https://www.nature.com/articles/s41598-018-24062-2>
- Production of graphene through Ethylene and heat
 - <https://www.thegraphenecouncil.org/blogpost/1501180/274729/Simple-Approach-for-Producing-Pure-Graphene-Opens-Up-Applications>
- Benefits of graphene as engine metal coating to improve performance
 - <http://www.materialsforengineering.co.uk/engineering-materials-explore/coatings-and-tribology/features/graphene-balls-in-car-engines-oil-benefits-lubrication-and-reduces-friction-and-improves-fuel-consumption-mpg/116527/>
 - <http://www.graphene-uses.com/graphene-balls-improve-oils-lubricants-performance/>
- Engineering research on graphene based lubricant
 - <https://www.engineering.com/DesignerEdge/DesignerEdgeArticles/ArticleID/17297/Graphene-based-Solid-Lubricant-as-a-Replacement-for-Oil.aspx>
- Brazilian car racer Felipe Giaofone champion of Formula Truck using NanoPolisher
 - <https://twitter.com/NanoXD/status/772116142164959232>

4. Can the Lubricant Reaction in the engine cause any short-term or long-term loss or damaged in the engine?

- No! It's not possible to cause any damage. Due to the natural properties and minute atomic size of graphene, it will react with the engine heat and continue to polish and adhere with the metal, disappearing as the engine runs.

5. How do I add NanoXD to my bearing grease?

- NanoXD can be mixed (in a 1:9 - 10% ratio) into any bearing grease. Simply stir the liquid into the grease thoroughly, then apply as usual to the bearing surfaces.

6. Does the Lubricant void my Warranty?

- No. NanoXD is compatible with all Additive and Oil components.

7. What if my intended use is not listed here or on the dosage chart?

- NanoXD may be added to any lubricant or grease in a 1:9 (10%) ratio.
- Remember not to deduct any of the lubricant or grease volume when adding NanoXD.
- NanoXD is always added ON TOP of the normal circulating volume of lubricant.

8. What is "Ra" and why is it important?

- "Ra" (Roughness Average) is the measurement used to describe how uneven is a surface of a metal. It's the average depth and height of the uneven metal surface of engine parts.

- These friction-causing imperfections between 2 metal surfaces are known as "asperities".
- NanoXD's ISN technology is designed to polish the asperities away (over time) to near atomic-level perfection. In laboratory tests of engine parts from an automobile using NanoXD, the measured Ra value was 3.4 nm. This is significant, as this value represents a 99% removal of asperities and an over 1,000% improvement in surface smoothness! These levels of tribological performance for a lubricant additive have never been achieved before in the history of mankind!

9. Can I use NanoXD Nanopolisher in place of regular motor oil?

- No! NanoXD is a molecular nanopolishing additive technology and NOT a lubricant!
- NanoPolisher provides longer term/permanent benefits increasing the life of the oil and mpg; However, the engine still require the oil recommended by the manufacturer, which must be replaced when oil is dirty or based on manufacturers guidelines.
- You will experience a significant decrease of burned oil, since the engine friction will decrease to a large percentage.

10. Does Nanopolisher replace the need of any other type of oil additive?

- Yes. There is no need to use any other additive.

11. Does it compare to other oil additives?

Product	Nanopolisher ISN (In-Situ Nanopolishing)	Latest EP/ AW Additives Lucas Heavy Duty, Sea Foam Fx, Archoil AR9100, etc..	Regular Additive "detergent" (Penzoil, Chevron, etc...
Chemical Principle	Generate Graphene. Polish the metal at molecular level. Create protective layer	Create a protective layer in the engine	Detergent chemical agent
Agent Result	<ul style="list-style-type: none"> • 99% elimination of asperities, • Coated parts • Eliminate Oil Burn – Clean Oil 	<ul style="list-style-type: none"> • 10% to 20% elimination of asperities, • Coated parts • Reduce Oil Dirt 	<ul style="list-style-type: none"> • 0% elimination of asperities • Limited reduction on oil dirt
Vehicle Results	<ul style="list-style-type: none"> • High Improvement on Oil • High Reduction on Gas • Low Carbon Emission • Zero Engine Breakdown. 	<ul style="list-style-type: none"> • Improve Oil Quality • Limited Reduction on Gas 	<ul style="list-style-type: none"> • Limited improvement on oil quality