

ACHIEVE OPERATIONAL **EXCELLENCE** ON YOUR WIND FARMS



To minimize costs and maximize ROI across your wind farms, you need to achieve operational excellence. This means you must ensure every one of your turbines gets the best protection, while minimizing downtime and your total cost of ownership. Castrol's new wind-turbine grease **Tribol GR SW 460-1** has been designed to help you to achieve these goals. Here's how...



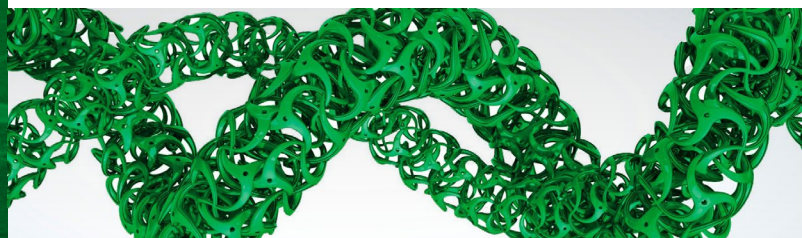
THE PROBLEM WITH CONVENTIONAL LUBRICANTS

Conventional lubricants use sacrificial additives that get used up and need to be replenished. So even though they protect equipment, there's still wear – and breakdowns still happen.



TRIBOL GR SW 460-1 TAKES A **COMPLETELY** **DIFFERENT APPROACH**

It uses MicrofluxTrans Plastic Deformation technology (MFT PD). This actively smooths the surface, without depositing or removing material. **That means less pressure, less friction and less wear.**



IT'S MORE THAN JUST OIL. IT'S LIQUID ENGINEERING.

 **TRIBOL**

MINIMIZE DOWNTIME & COSTS

MFT PD is non-sacrificial and needs replacing less frequently.

THE RESULT



is increased protection and maintenance,

AS WELL AS



lower energy and lubricant costs.

MAXIMIZE ENERGY EFFICIENCY AND COMPONENT LIFE

Tribol GR SW 460-1 is designed to reduce wear from static vibration known as false brinelling, helping to maximize the life of your turbines.



It's also low friction, meaning it improves energy efficiency and prolongs component life.

THE CHALLENGE OF HARSH CONDITIONS



You likely have wind farms that are **subject to tough environmental conditions** where temperature and humidity can't be controlled.

UNFORTUNATELY, MANY LUBRICANTS ON THE MARKET ARE NOT DESIGNED TO ENDURE HIGH LOADS AND LOW TEMPERATURES.

GIVE YOUR TURBINES BETTER PROTECTION

Tribol GR SW 460-1 withstands high loads, while resisting shearing, wear and water ingress. With good mobility for easy start-up and good protection against fretting, even below 0°C, our new wind turbine grease offers truly outstanding protection – no matter where your turbines are located.



TRIBOL GR SW 460-1 HAS EXCELLENT LOW TEMPERATURE PERFORMANCE



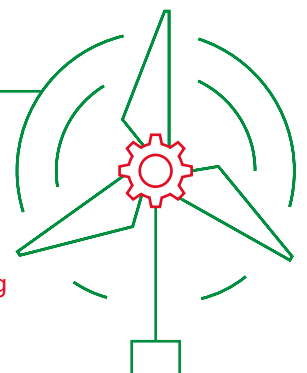
Competitor products with the same base oil ISO VG class have **significantly higher flow pressure and lower temperature torque results by around 50%**. *Tribol GR SW 460-1* makes automatic lube systems much more reliable and turbines generate more power in cold conditions.

INCREASE THE LIFE OF TURBINES BY 4+ YEARS

Tribol GR SW 460-1 helped a major owner increase the life of a damaged turbine bearing by

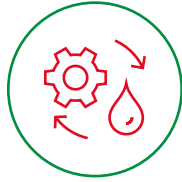
4+ YEARS.

After being identified as having only 6-9 months remaining useful life, **Tribol has kept the bearing running to this day resulting in significant cost savings.**



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CONVERT WITH EASE

Converting to **Tribol GR SW 460-1** is easy, as it has been successfully tested for compatibility with all major greases, meaning you can change to **Tribol GR SW 460-1** during the normal purging of existing grease in your next maintenance cycle.



ACHIEVE EXCELLENT OPERATION CONDITIONS

With **Tribol GR SW 460-1**, a major owner was able to **minimize temperature and vibration**, which was damaging their turbines. Three years post-change, the turbines were **still achieving excellent operating conditions**.



To discover how **Tribol GR SW 460-1** will help your business to achieve operational excellence across your wind farms, speak with David Dinunzio on

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or email

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to find out more.

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