

GST ADVANTAGE™ EP WITH VARTECH™ TECHNOLOGY



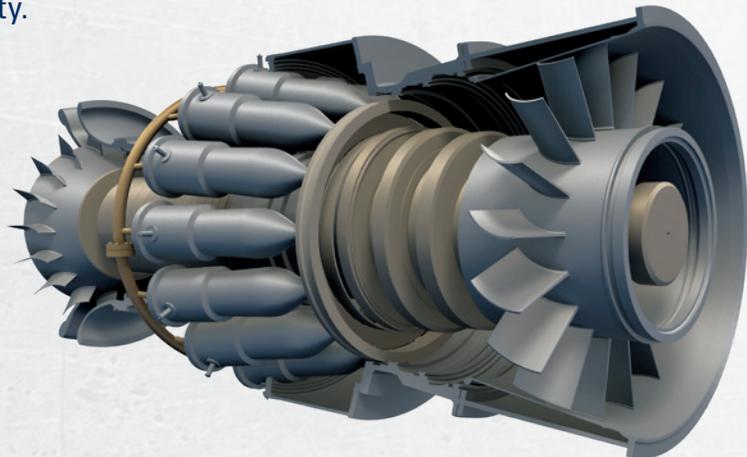
INDUSTRIAL
LUBRICANTS

Today's high-demand, high-severity operational environments call for an exceptional turbine oil: GST Advantage™ EP with VARTECH™ Technology.

For both steam and gear-driven turbines, reliability is more critical than ever. Operating environments are getting hotter, harsher and more remote. Turbine metallurgy is at the edge of its temperature limits. Combined-cycle plants are raising the potential for water contamination. Startup times are shrinking. And through it all, uptime is an absolute must. Chevron GST Advantage EP with VARTECH Technology helps you meet these challenges head on, so your turbines run when they need to and your operation thrives.

GST Advantage EP delivers enduring performance on many fronts. It's formulated to help protect equipment from the varnish that causes valves to stick, bearings to fail, oil inlets and filters to clog, temperatures to spike, turbines to prematurely shut down. It also slows oil degradation through facilitation of water contamination removal to help prevent rust formation. GST Advantage EP can help you extend drain intervals, so you can synchronize oil changes with other scheduled maintenance and keep your gear-driven turbines available and generating revenue.

GST Advantage™ EP with VARTECH™ Technology inhibits varnish formation to help maintain peak performance, reliability and productivity.



Fight your turbine system's worst enemy – varnish

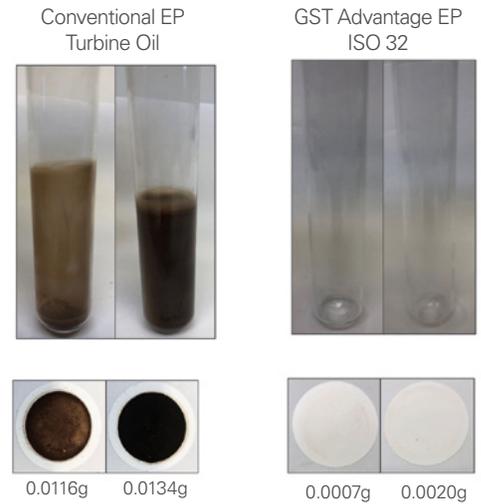
Among the many sinister elements attacking turbines, varnish can be the most destructive. To battle this menace, Chevron has formulated select GST[®] turbine oils with VARTECH[™] Technology. The advanced lubrication chemistry used in VARTECH Technology inhibits the formation of varnish precursors, products of oil degradation that can deposit on internal surfaces and build up over time. You get exceptional oxidation stability, less degradation and long oil life – a breakthrough approach to varnish control.



High Temperature Aging Test: 150°C, 1-week and 3-week aging

GST Advantage™ EP with VARTECH™ Technology provides long oil life and varnish and deposit control. The product formulated with VARTECH Technology shows dramatic improvement over the Conventional EP Turbine Oil.

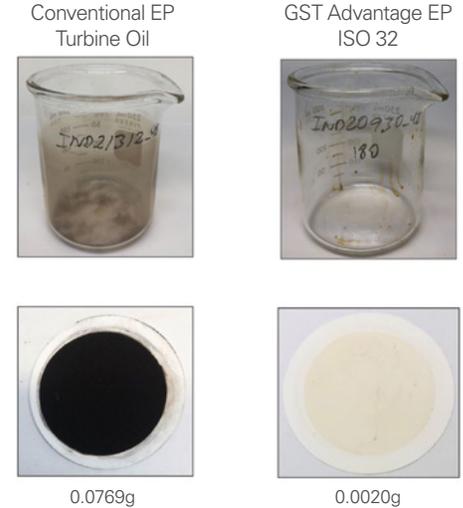
EP performance was not sacrificed with high deposit control but is due to the balanced formulation using VARTECH Technology. A strong level of EP, combined with varnish and deposit control, are maintained with this formulation.



High Temperature Aging Test: 180°C, 48 hours

Even though the test duration is decreased, the increased temperature represents the impact extreme temperatures hot spot in a piece of equipment can have on fluids. The results can be seen clearly under these test conditions.

The thermal instability of the Conventional EP product is further stressed and results in a high degree of deposits and sludge formation. When GST Advantage™ EP with VARTECH™ Technology is stressed, it demonstrates very strong thermal stability properties.



Performance Bench Data

Test Method	Requirement	Unit	GST Advantage™ EP 32
Viscosity Index	≥ 100	-	112
Water Content	≤ 100	mg/kg	<25
D892 Foam Sequence II Tendency	≤ 50	mL	10
D892 Foam Sequence II Stability	0 after 10 min	vmL	0
Demulsibility (D1401)	≤ 20	Min	40-40-0(10)
Flash point D92	> 200	°C	226
Pourpoint	≤ -12	°C	-36
Copper strip corrosion, 3h at 100°C D130	≤ 2	-	1A
Rust-preventing characteristics, ASTM D665 Procedure B	pass	-	Pass
FZG-Test; A/8,3/90 failure load stage	≥9	-	10
<i>Oxidation stability (RPVOT) D2272</i>	≥ 750	min	2200

Management of Change (MOC) and GST Advantage™ EP with VARTECH™ Technology

Proper lubricant selection can help you extend oil life until your next major scheduled shutdown. Our product and technology experts have invested countless hours testing and analyzing product compatibility between our GST® turbine oils. Our GST turbine oils provide high thermal stability, allowing you to minimize varnish and maximize oil life. If you are considering switching to our GST family of turbine oils, we recommend that you refer to your MOC and Replacement in Kind (RIK) policy guidelines. Our industry experts are available to assist in any MOC transition requirements.

For further information, please contact your local Chevron Sales Representative.

Learn more at
chevronlubricants.com



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