

ESSO

Meet the Next Generation of Essolube GMA PLUS 40 Natural Gas Engine Oil

Canada's best seller just got better!

See how optimal oil life and deposit control can help
keep *your* system running at peak efficiency.



Canada's leading natural gas engine oil stays in the lead with optimized oil-drain intervals.

You know why you want reduced downtime, lower costs and all the other advantages that come with extended oil drains.

What you may not have known till now is that you can have these advantages in a lubricant that also reaches new heights in engine cleanliness and control of deposits and varnish (as you'll see for yourself on the facing page!).

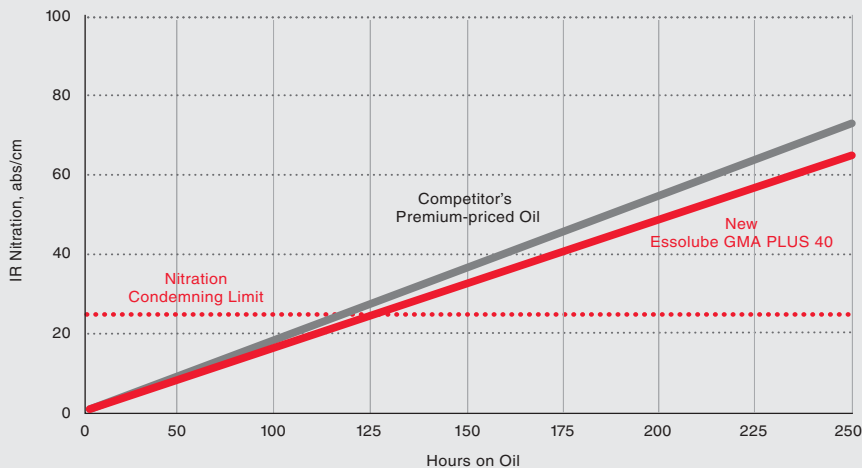
One secret to the success of Essolube GMA PLUS 40 in optimizing oil life and deposit control was the decision to structure it with custom-made components, instead of using ready-made 'off-the-shelf' packages from outside suppliers.

The result is the most advanced natural gas engine oil we have ever produced. The charts below tell the story.

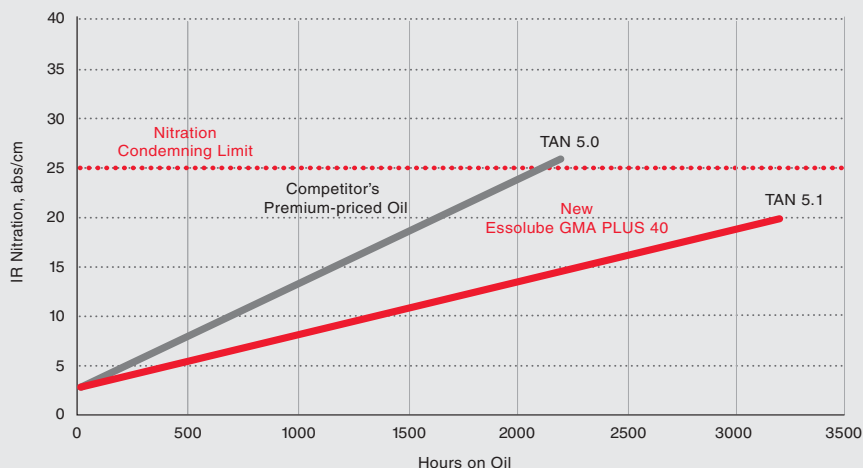
New and improved Essolube GMA PLUS 40 is the result of:

- Decades of experience in the natural gas industry
- Close relationships with original equipment manufacturers (OEMs)
- Our Sarnia Research Centre – the largest of its kind in Canada
- Extensive industry-wide field testing

These unique advantages have brought us to our latest generation, with its combination of extended drains and leading-edge cleanliness. Please note that oil-drain intervals, like auto-fuel mileage, can vary with conditions. These include: engine load, timing, operating temperature, air-to-fuel ratio, sump size, oil consumption, gas quality and filtration efficiency.



In this Caterpillar 3406 engine test we deliberately ran Essolube GMA PLUS 40 and a higher-priced competitive oil to destruction. Note the distinction between the two products in the all-important category of nitration.



In the field, the hours were longer – and the results were even more impressive! Essolube GMA PLUS 40 ran for 3,200 hours in a Caterpillar 3512 TA before exceeding a TAN target of 5.0. Significantly, the nitration level of the competitive oil was almost double that of our product (26 vs. 14) when it failed after just 2,200 hours of service.

New and improved Essolube GMA PLUS 40: Defending engines. Defeating deposits.

The evidence is in. Essolube GMA PLUS 40 is the oil to choose to help keep your engines clean and free from deposits.

From simple comparisons on metal test strips, to back-to-back tests on our in-house Caterpillar 3406, to our long-running customer field-testing program, the results are consistent.

Essolube GMA PLUS 40 reaches unprecedented new levels of performance in fighting off deposits that could lead to serious problems down the road.

The advantages of superior cleanliness include:

- Reduced risk of excessive valve deposits, which can lead to valve hang-up and head failure;
- Less chance of carbon building up in the piston ring zone, which leads to ring sticking and increased oil consumption;
- Reduced crown land deposits, which can lead to liner wear and, ultimately, liner failure.

Whether your goal is cleaner engines, optimized oil drains or both, there is no other natural gas engine oil available that can do the job of new Essolube GMA PLUS 40.

Carbon Deposits



New Essolube
GMA PLUS 40



Premium-priced
Competitive Oil

Varnish Deposits



New Essolube
GMA PLUS 40



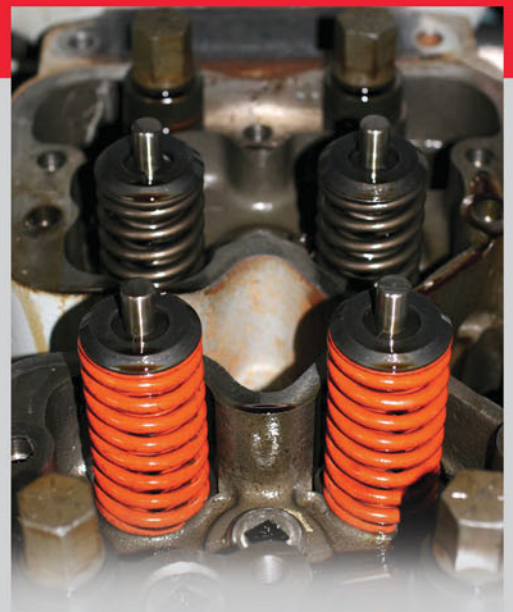
Premium-priced
Competitive Oil

Metal test strips heated to very high temperatures help measure an oil's ability to resist the formation of deposits and varnish in such critical areas as piston ring zones and valve stems. The competitor's premium-priced oil resulted in higher carbon deposits and significantly more varnish than new Essolube GMA PLUS 40.

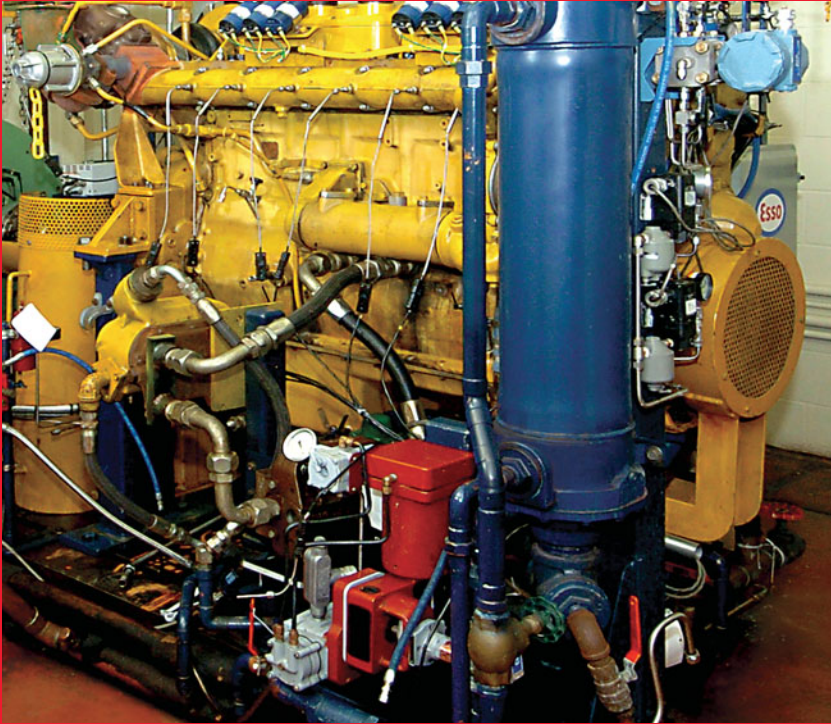


After 4,000 hours (five-and-a-half months of service) the components on this page were removed from a Waukesha 7042 GSI running on new Essolube GMA PLUS 40. Note that the piston remains remarkably clean for the type of service endured. Clean pistons help guard against scuffed liners and sticking rings, which could increase oil consumption and shorten the life of both the oil and the engine.

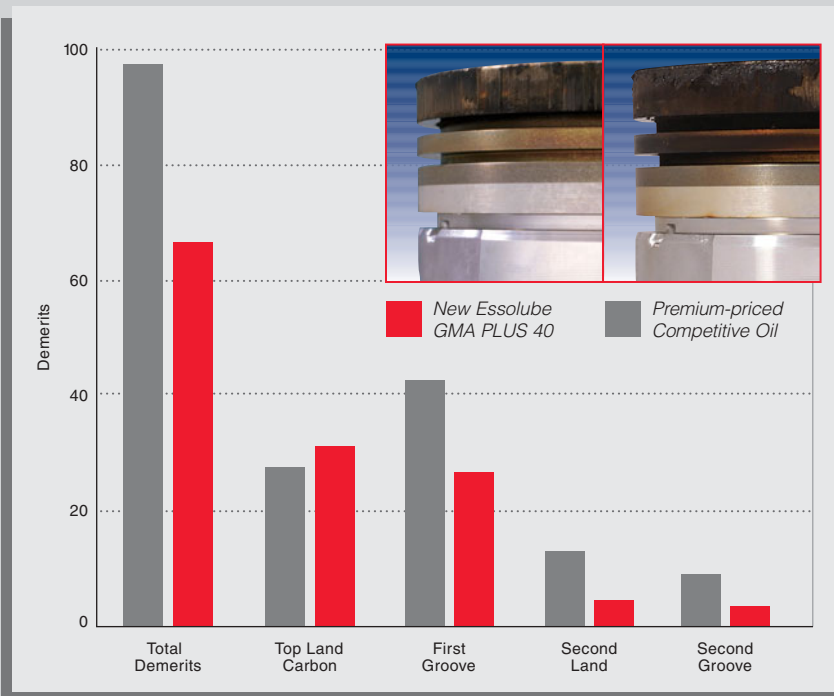
This valve cover, removed from a customer's Waukesha 7042 GSI, shows remarkable cleanliness considering the severe service it endured for 4,000 hours. The lubricant was new Essolube GMA PLUS 40. Less effective oils can leave valve deposits, leading to sticking valves which, in serious cases, can cause valve torching and head failure.




When a rocker arm assembly looks this clean after 4,000 hours of severe service, it's a sure sign that new Essolube GMA PLUS 40 is in the crankcase! The absence of any sign of sludge means less risk of filtration problems or corrosive compounds attacking bearings and other components. In all our years of product testing, we have never seen a product that comes even close to the performance levels now available with Canada's best-selling natural gas engine oil.



Our Caterpillar 3406 engine stand is a unique resource that has helped us advance each generation of Essolube GMA PLUS 40 through one successive breakthrough after another. On this equipment we run our own – and competitive – natural gas engine oils to destruction. Then we compare the results at our Sarnia Research Centre, the largest facility of its kind in Canada. Running comparisons with competitive products confirms our success in controlling those attributes that have the greatest effect on oil life, including nitration, TAN, viscosity and oxidation.



These pistons were taken from our Caterpillar 3406 engine after an Extremely Severe Service (ESS) test. Note the much cleaner ring zones in the piston on the left. Pistons were rated using the Coordinating Research Council (CRC) method for testing deposit control. Overall, the competitor's oil received 44 percent more demerits than Essolube GMA PLUS 40 (97.5 versus 67.5).



Karl Mrazek, Technical Manager, Oil & Gas, Imperial Oil Lubricants & Specialties, says, "Everyone knows you can pay more for a natural gas engine oil. Now everyone knows you don't have to!"

“This is *exactly* the breakthrough our NGENO customers were hoping for, and Imperial Oil came through again!”

Meet the latest, most advanced, generation of Canada's best-selling natural gas engine oil. This is the formulation that brings everything together.

Earlier formulations improved on piston deposits. Then we went to work on valve deposits, varnish and corrosion control. More recently, we delivered reduced deposits and longer oil drain intervals. Now it's cleaner engines than ever, along with oil-drain intervals longer than any other product encountered in our 30-year history of field testing.

Meanwhile, the antiwear formulation guards against premature cylinder wear, piston scoring and scuffing. And as you'll see inside, Imperial Oil has raised deposit control to an entirely new level!

As you're likely aware, there are no API standards for natural gas engine oils. Customers have to trust their lubricant supplier to keep their equipment running and reliable.

With these latest improvements to Essolube GMA PLUS 40, those who count on Imperial Oil are seeing their trust rewarded!

Imperial Oil

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Lubricants & Specialties