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ConocoPhillips[®]
Lubricants



THE TEST RESULTS

Guardol ECT™ synthetic blend offers excellent performance among leading competitors. In 12 tests, Guardol ECT demonstrated better corrosion, lead and wear protection than three leading competitors.

There is a better CJ-4 oil.



What did we test? 12 critical factors.

VISCOSITY INDEX

Temperature fluctuation can cause widely varying levels of engine protection due to change in oil viscosity (resistance to flow). **Viscosity Index** measures the oil's ability to maintain the same viscosity as temperatures change. The higher the Viscosity Index, the more stable the oil's viscosity in both high and low temperatures.

USED OIL PUMPABILITY

Aging oil contains higher levels of soot, sludge and oxidation by-products, affecting the flow of oil to critical engine parts. **Used Oil Pumpability** demonstrates the oil's ability to maintain proper flow rate, especially after prolonged use.

OXIDATION PROTECTION

Oxidation deposits cause sticking, malfunction of close-clearing moving parts and poor heat transfer. **Oxidation Protection** indicates the ability of oil to resist oxidative breakdown.

RUST PROTECTION

Acids and water enter oil as a result of the combustion process and can cause internal engine parts to rust. **Rust Protection** measures the ability of oil to prevent rust when exposed to acid and water.

LEAD (Pb) PROTECTION

When critical bearing parts made of lead and Babbitt metals become corroded, the result is shortened engine life. **Lead Protection** demonstrates the ability of oil to prevent lead corrosion.

COLD FLOW

Low temperature causes oil flow to slow, resulting in poor engine lubrication. **Cold Flow** is a measure of a new oil's ability to flow freely at low temperatures under gravity and low torque.

CRANKING VISCOSITY

Among the factors prone to inhibit oil flow, low temperature is a leading cause of engine harm. **Cold Cranking Viscosity** demonstrates the oil's ability to flow to all parts of the engine at low temperature under cranking conditions.

HIGHER SHEAR VISCOSITY

Shearing causes premature wear and shortened engine life due to loss of viscosity. **Higher Shear Viscosity** shows how well oil maintains steady viscosity by resisting shearing loss at high temperatures and under pressure as oil passes through an engine's many narrow clearances.

SOOT HANDLING

Engine combustion creates soot, increasing oil viscosity over time and threatening pumpability. **Soot Handling** measures an oil's capacity to hold or disperse soot while minimizing viscosity increase.

DEPOSITS PROTECTION

Sludge, carbon, and other deposits block clearances between components, clog oil passages, reduce oil flow, plug filters and lead to poor heat transfer. **Deposits Protection** indicates the oil's capacity to keep critical parts clean and working properly.

WEAR PROTECTION

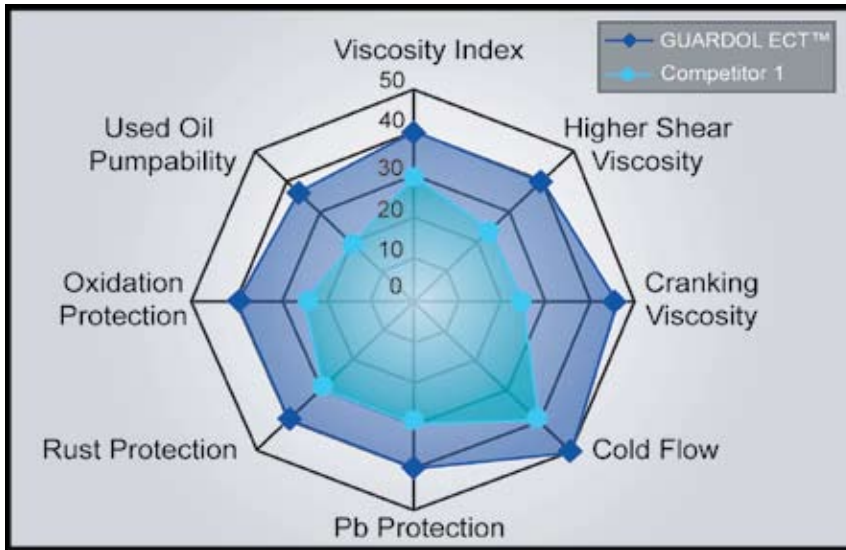
Engine wear occurs when insufficient lubrication leads to metal-on-metal contact in an engine, leading to premature engine teardown. **Wear Protection** measures the ability of the oil to maintain proper film strength to protect engine components.

BASE OIL QUALITY

Highly refined base oils have little or no sulfur or aromatics and are suitable for producing high-quality finished lubricants. **Base Oil Quality** measures the initial quality of the base oil.



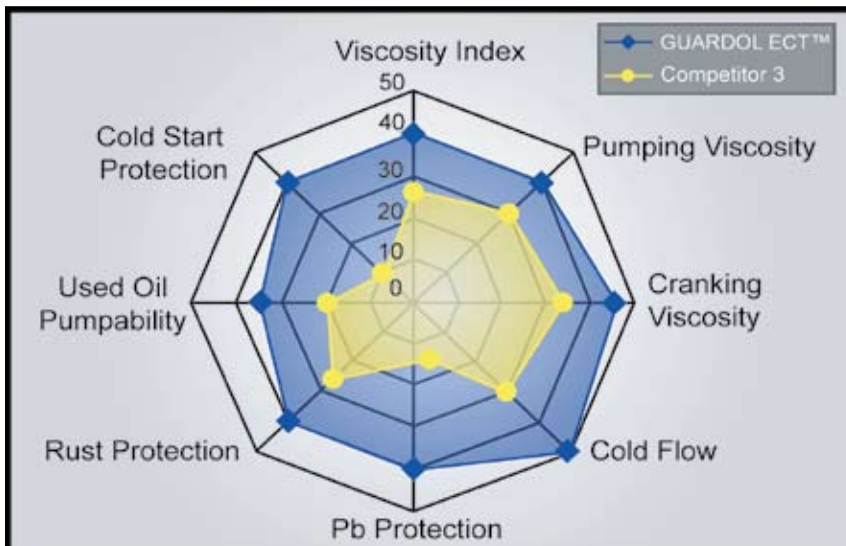
How did we do? See for yourself.



SUMMARY: Against Competitor 1, Guardol ECT™ demonstrated better results across all test criteria, particularly Cold Cranking Viscosity, Oxidation Protection and Used Oil Pumpability.



SUMMARY: The performance benefits of Guardol ECT over Competitor 2 include greater Soot Handling for minimal viscosity-increase and better Cold Flow for easier start-ups and safer low-temperature operation.



SUMMARY: In each area tested against Competitor 3, Guardol ECT showed consistently better results. The Cold Start Protection properties of Guardol ECT tested notably higher than Competitor 3.

HOW TO READ THE CHARTS: Each chart above compares Guardol ECT to a competitor in 8 performance categories. Evaluate Guardol ECT in any category measure by observing its score relative to the competitor. Higher performance scores are closer to the outer edge; lower performance scores are nearer the center. Color codes are used to help distinguish the products being compared.