



QUADREX®

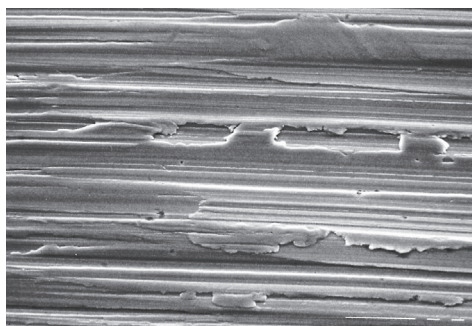
4-CYCLE GAS ENGINE OIL

Royal Purple® Quadrex® is a low-ash, synthetic blend, high performance, four-cycle natural gas engine oil. Quadrex extends oil drain intervals, reduces fuel consumption and keeps engines clean. Its unique formulation, utilizing an advanced gas engine additive package and a healthy dose of Synerlec®, provides a tough and tenacious oil film that significantly improves engine reliability and reduces maintenance costs.

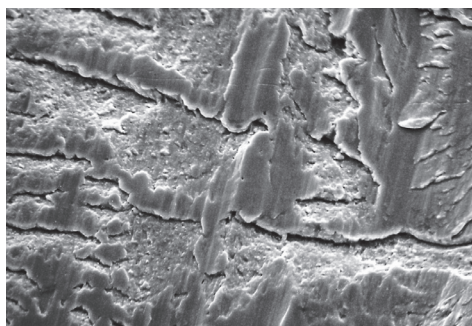
Synerlec® is Royal Purple's proprietary additive chemistry that greatly increases the protective film strength of the oil, reducing metal to metal contact, friction and wear. This unique and highly effective additive technology greatly enhances wear protection above and beyond

that achievable in any other commercially available engine oil. Synerlec® also increases the oil's resistance to thermal degradation, enhancing lubrication at extreme engine temperatures, reducing deposit formation and lengthening the oil's useful life.

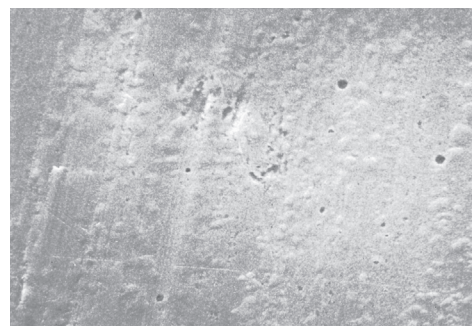
Quadrex® is also available in a high-alkalinity, high TBN (total base number) formulation for use with high sulfur and sour gas applications. The increased alkalinity fights the increased acidity of combustion by-products produced by dirty fuel gas. The high TBN formulation is also higher in ash content; however, the excellent solvency of Quadrex helps prevent deposit formation due to the increased ash content.



New bearing*



After leading synthetic*



New Royal Purple with Synthetic*

* Same bearing shell from same engine, magnified 1500x

PERFORMANCE ADVANTAGES

REDUCED MAINTENANCE COSTS - Improves engine reliability and extends engine life

INCREDIBLE FILM STRENGTH - Superior protection for the crank and bearings; prevents piston ring / cylinder seizing and scuffing

INCREASED FUEL EFFICIENCY - A low coefficient of friction and promotes improved sealing between piston rings and cylinder walls to improve combustion efficiency

SUPERIOR CLEANLINESS - Excellent for lean burn, fuel efficient engines that cause rapid oil oxidation, and dirty engines



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TECHNICAL DATA

Property	Test Method	SAE 40	SAE 40
		STANDARD	14 HB
Viscosity @ 40°C, cSt	ASTM D445	125	125
Viscosity @ 100°C, cSt	ASTM D445	13.6	13.6
Viscosity Index	ASTM D2270	104	104
Flash Point, °C (°F)	ASTM D92	252 (485)	252 (485)
Pour Point, °C (°F)	ASTM D97	-36 (-33)	-36 (-33)
Rust Preventing, Fresh Water	ASTM D665A	PASS	PASS
Rust Preventing, Salt Water	ASTM D665B	PASS	PASS
Copper Corrosion	ASTM D130	1A	1A
TBN,mg KOH	ASTM D2896	6	14
Sulfated Ash, %	ASTM D874	0.45	1.6

1/7/2021