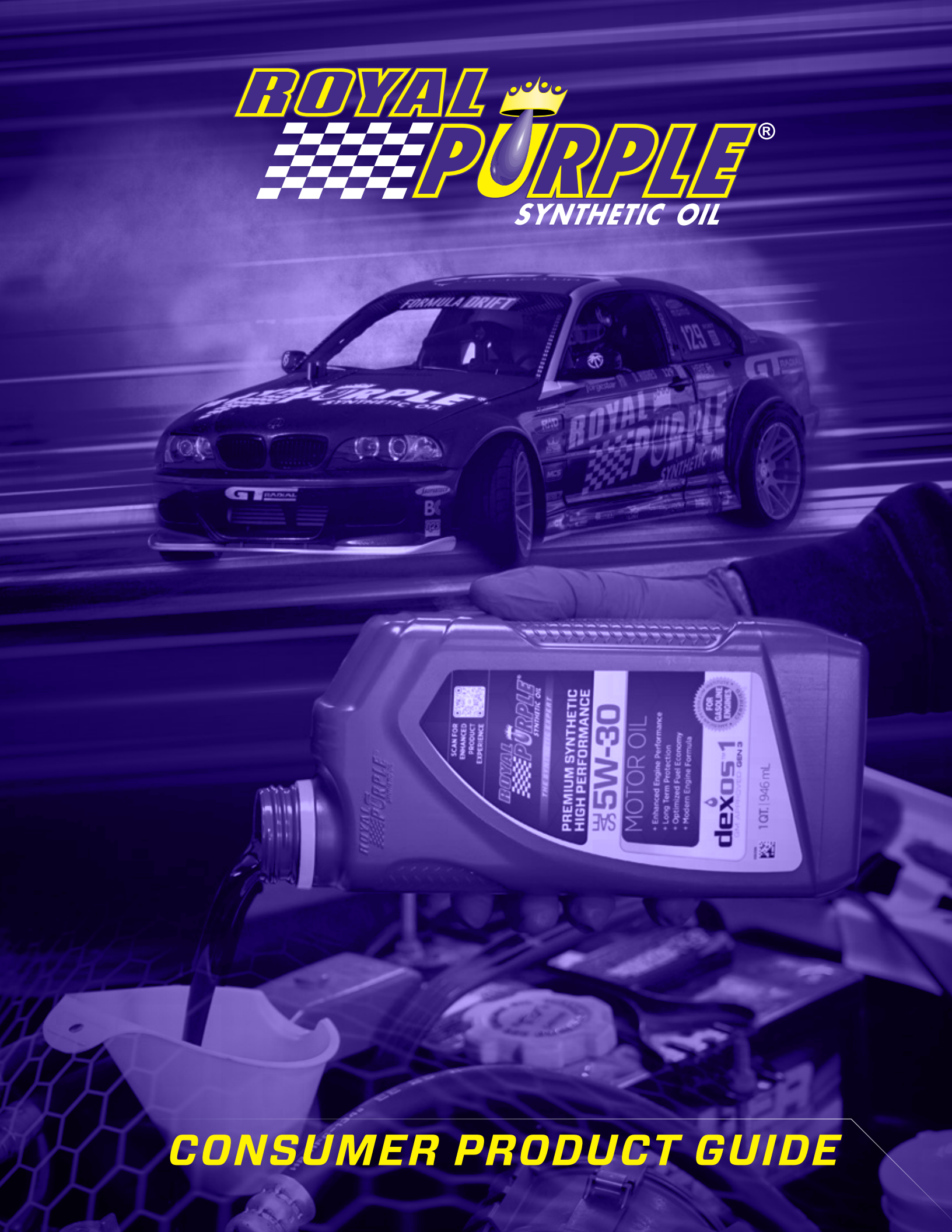
ROYAL PURPLE®
SYNTHETIC OIL



CONSUMER PRODUCT GUIDE

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THE BIRTH OF A NEW LUBRICANT TECHNOLOGY

Royal Purple® was founded as an industrial lubricants company by John Williams, a pioneer in developing synthetic lubricants as far back as the 1950's. He continued pursuing his passion for lubrication by serving as a consultant to numerous companies after his retirement in the 1980's.

In 1986, an oil production company asked Williams to solve chronic bearing failures in their large compressors. He found that there was not a lubricant available that could handle the extreme demands of the equipment. He put his extensive lubrication background to work in developing a new lubrication technology.

Williams developed a new additive technology that fortified lubricants with unusually high film strength capable of protecting bearings under extreme loads. This unique technology also had exceptional oxidation stability for long oil life. The new lubricant provided outstanding protection against rust and corrosion in wet and high temperature applications, cleaned equipment and prevented varnishing and sludge build-up.

The new lubricant easily solved the company's equipment problems. The plant manager said it was so superior to anything he had tried before that it should not look like other lubricants. Williams elected to make the lubricant purple. The new lubricant became the cornerstone of the Royal Purple product line. Williams decided to name the company Royal Purple since historically the color purple was so expensive to produce that only royalty used the color.

THE COMPANY EVOLVES

Industrial customers initially tried Royal Purple on the most demanding and problem equipment. Customers could easily explain the rationale for switching lubricants because no other products performed as well. Over time, industrial customers were able to document the energy and maintenance cost savings to justify upgrading their entire plants to Royal Purple industrial lubricants.

Along the way, Royal Purple began formulating racing lubricants at the request of many industrial customers who were also part-time racers. Racers noticed that Royal Purple not only dramatically reduced wear, but also maximized horsepower and torque. Demand for Royal Purple racing oils rapidly spread throughout all forms of racing.

The formulation of racing oils laid the foundation for the development of super-premium motor oils for consumer use. Royal Purple consumer motor oils and other automotive products were introduced through national automotive parts retailers beginning in 2003. There are now nearly 25,000 retailer locations in the US selling Royal Purple consumer products.

Today, Royal Purple products are widely recognized as a super-premium line of consumer automotive products competing head-to-head with the largest oil companies. Royal Purple products continue to grow in the US and internationally. Royal Purple was acquired in 2012 by Calumet (CLMT), a leading refiner and processor of specialty hydrocarbon products headquartered in Indianapolis, IN.

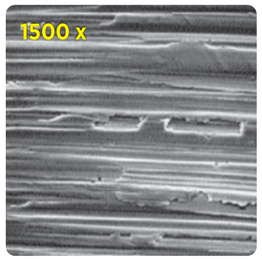
ADVANCED TECHNOLOGY CREATES ADVANCED PRODUCTS

Synerlec® additive technology is the most versatile additive technology and the cornerstone of our product line. Synerlec enables our products to significantly outperform ordinary synthetic and conventional lubricants. This proprietary additive technology improves our products on a molecular level, creating high-strength ionic bonds with metallic surfaces that allow our lubricants to react to sustained heat and pressure with increased film strength and lubricity.

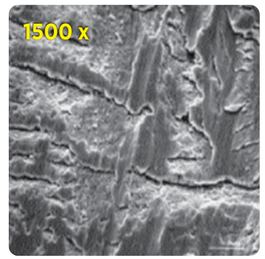
HIGH FILM STRENGTH IMPROVES PERFORMANCE

The film strength of a lubricant is its inherent ability to maintain a protective oil film, resisting the effects of load, speed and temperature. When the oil film is breached, metal to metal contact occurs, which results in greater friction and heat generation and accelerated wear. Royal Purple Synerlec-enhanced lubricants provide dramatically increased oil film strength that is 3 to 4 times as strong as oil film provided by any other comparable lubricant. This dramatically improved film strength results in less metal-to-metal contact, less short and long-term wear, lower operating temperatures and increased piston ring seal in engines. Royal Purple Synerlec-enhanced lubricants respond to increased pressure with increased oil film strength, where other lubricants have been displaced. Take a look at the following photos:

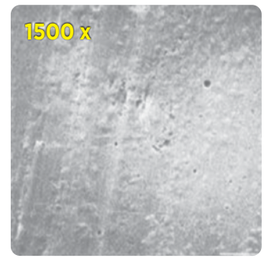
BEARING COMPARISON



A new bearing surface appears smooth until magnified 1500X.



The bearing is scuffed after using a leading synthetic motor oil.



The bearing is visibly smoother after using Royal Purple HPS.

Royal Purple premium synthetic motor oils provide superior performance and protection for a variety of vehicle applications. Our motor oil line covers in warranty gasoline, diesel, and hybrid vehicles, high performance and out of warranty vehicles, high mileage vehicles over 75,000 miles, powersports equipment and race cars.

PREMIUM SYNTHETIC HIGH PERFORMANCE MOTOR OIL

AVAILABLE PACKAGE SIZES

MULTI-GRADE OILS
SAE 0W-20, 5W-20, 5W-30 & 10W-30

Royal Purple products combine premium synthetic base oils with proprietary additive technologies to exceed protection and performance requirements of new modern engines. These often include smaller displacements, turbo chargers, gasoline direct injection (GDI), and start/stop systems.

+ Optimized fuel economy
+ Enhanced engine performance
+ Long-term protection

Royal Purple High Performance engine oils carry the current API and ILSAC engine oil licenses, as well as the GM dexos™1* gasoline engine oil approval.

+ **BETTER WEAR PROTECTION**
Enhanced additive technology prevents metal-to-metal contact beyond both GM dexos™1* and ILSAC GF-7A specs

+ **INCREASED FUEL EFFICIENCY**
A low coefficient of friction results in optimized fuel efficiency

+ **BETTER PROTECTION FOR VEHICLE EXHAUST EMISSIONS EQUIPMENT**
Patented anti-wear additive chemistry minimizes the harmful effects exhaust gases pose to the catalyst

+ **5X INCREASED PROTECTION AGAINST LOW SPEED PRE-IGNITION (LSPI)**
Advanced additive chemistry reduces LSPI in turbocharged Gasoline Direct Injection (GDI) engines to protect engine components and maximize engine life

+ **SUPERIOR CORROSION PROTECTION**
No rust observed in standard industry testing

*dexos™1 is a registered trademark of General Motors LLC.

53% BETTER OXIDATION RESISTANCE**

Maximum protection from oil breakdown.

43% BETTER WEAR PROTECTION**

Enhanced additive technology prevents metal-to-metal contact beyond ILSAC GF-7 requirements.

26% IMPROVED DEPOSIT CONTROL**

Removes power robbing deposits for like new performance.

18% ENHANCED SLUDGE PROTECTION**

Cleaner engines operate more efficiently, lowering operating temperatures.

** Comparisons based on API SQ, ILSAC GF-7A requirements, and/or dexos™1 Gen3.

HIGH PERFORMANCE MULTI-GRADE OILS — TYPICAL PROPERTIES***

ASTM TESTS		SAE GRADE/API SERVICE			
		0W-20 [1,5] SQ	5W-20 [1,4] SQ	5W-30 [1,2] SQ	10W-30 [1,3] SQ
D445	Viscosity				
	cSt @ 40˚C	45.9	46.19	62.40	61.59
	cSt @ 100˚C	8.6	9.55	10.54	10.05
D2270	Viscosity Index	168	153	159	150
D5293	Cold Crank Simulator				
	cP @ -35˚C	5,950			
	cP @ -30˚C		4,335	6,009	
	cP @ -25˚C				4,188
D4683	HTHS	2.6	2.7	3.2	3.2
D97	Pour Point ˚C (˚F)	-42 (-44)	-42 (-49)	-44 (-47)	-39 (-38)
D92	Flash Point ˚C (˚F)	232 (450)	227 (440)	238 (460)	243 (470)
D4052	Density @ 15˚C, g/mL	0.8478	0.8505	0.8555	0.8502

***Properties are typical and may vary.
1 API SP Resource Conserving and ILSAC GF-7A.
2 5W-30 meets Chrysler FCA US MS-6395, Ford WSS-M2C961-A1, GM 6094M specifications and GM dexos™1* Gen 3 warranty requirements for gasoline engines.
3 10W-30 meets Chrysler FCA US MS-6395 and GM6094M specification for gasoline engines.
4 5W-20 meets Chrysler FCA US MS-6395, Ford WSS-M2C960-A1, GM6094M specifications and warranty requirements for gasoline engines.
5 0W-20 meets Chrysler FCA US MS-6395, Ford WSS-M2C962-A1 specification and GM dexos™1* Gen 3 warranty requirements for gasoline engines.
API designations are subject to change. Call our technical department at 888-382-6300 for additional information. For a complete list of OEM approved applications, download a product sheet at www.royalpurple.com.

PREMIUM SYNTHETIC HIGH PERFORMANCE MOTOR OIL

HIGH PERFORMANCE MULTI-GRADE PART NUMBERS

VISCOSITY	PACKAGE SIZE	ITEM NO.	MATERIAL NO.
0W-20	55 Gal. Drum	55020	300967175008
	6 Gal. BIB	60020	300967175033
	5 Gal. Pail	05020	300967175017
	3 x 5 Qt. Case	53020	300967175189
	5 Qt. Bottle	51020	
	6 x 1 Qt. Case	06020	300967175115
	1 Qt. Bottle	01020	
5W-20	55 Gal. Drum	55520	301907175008
	6 Gal. BIB	60520	301907175033
	5 Gal. Pail	05520	301907175017
	3 x 5 Qt. Case	53520	301907175189
	5 Qt. Bottle	51520	
	6 x 1 Qt. Case	06520	301907175115
	1 Qt. Bottle	01520	
5W-30	55 Gal. Drum	55530	301909175008
	6 Gal. BIB	60530	301909175033
	5 Gal. Pail	05530	301909175017
	3 x 5 Qt. Case	53530	301909175189
	5 Qt. Bottle	51530	
	6 x 1 Qt. Case	06530	301909175115
	1 Qt. Bottle	01530	
10W-30	5 Gal. Pail	05130	301071175017
	3 x 5 Qt. Case	53130	301071175189
	5 Qt. Bottle	51130	
	6 x 1 Qt. Case	06130	301071175115
	1 Qt. Bottle	01130	

HIGH PERFORMANCE STRAIGHT-GRADE PART NUMBERS

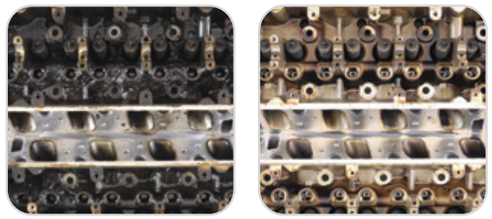
VISCOSITY	PACKAGE SIZE	ITEM NO.	MATERIAL NO.
SAE 30	6 x 1 Qt. Case	06030	301149175115
	1 Qt. Bottle	01030	
SAE 40	6 x 1 Qt. Case	06040	301905175115
	1 Qt. Bottle	01040	
SAE 50	5 Gal. Pail	05050	301444175017
	6 x 1 Qt. Case	06050	301444175115
	1 Qt. Bottle	01050	

HIGH PERFORMANCE STRAIGHT-GRADE OILS — TYPICAL PROPERTIES*

ASTM TESTS		SAE GRADE/API SERVICE		
		30 CK-4/SN**	40 CK-4/SN**	50 CK-4/SN**
D445	Viscosity			
	cSt @ 40˚C	75.3	124	185
	cSt @ 100˚C	10.1	13.8	18.6
D2270	Viscosity Index	119	109	112
D92	Flash Point ˚C (˚F)	226 (440)	232 (450)	234 (454)

*Properties are typical and may vary.
**Claimed performance; Royal Purple High Performance Straight Grade oils are not API licensed lubricants.

Actual before and after test results.



Valve deck

Piston

Scan here for additional product info.

High Performance Ultra-Low Viscosity motor oil on page 8

High Performance European Formulation motor oil on page 9

Duralec® diesel motor oils on pages 18 – 19

HIGH PERFORMANCE ULTRA-LOW VISCOSITY MOTOR OIL

New engine technologies are designed to increase fuel economy while providing excellent power and responsiveness. Gasoline Direct Injection (GDI), turbocharging and engine stop/start functions are now common in late model cars, and present unique lubricant challenges concerning protection while optimizing efficiency.

Royal Purple High Performance Ultra-Low Viscosity SAE 0W-16 motor oil combines premium synthetic base oils with proprietary additive technologies to exceed protection requirements, provide unsurpassed performance and maximize fuel economy. It meets or exceeds the requirements of API SQ Resource Conserving and ILSAC GF-7B specifications.

+ Optimized fuel economy
+ Enhanced engine performance
+ Long-term protection

+ **INCREASED FUEL EFFICIENCY**
  A low coefficient of friction and specialized formulation exceeds the 0W-16 fuel economy standards without compromising engine protection and performance
+ **43% BETTER WEAR PROTECTION***
  Enhanced additive technology prevents metal-to-metal contact beyond GF-7B specifications
+ **5X INCREASED PROTECTION AGAINST LSPI***
  Advanced additive chemistry reduces LSPI in turbocharged Gasoline Direct Injection (GDI) engines to protect engine components and maximize engine life
+ **CLEANER ENGINE**
  Cleaner engines operate more efficiently
  26%* IMPROVED DEPOSIT CONTROL* – Removes power robbing deposits for like new performance
  18%* ENHANCED SLUDGE PROTECTION* – Lowers operating temperatures & improved compatibility with ethanol containing fuels
+ **53% BETTER OXIDATION RESISTANCE***
  Maximum protection from oil breakdown to maintain a consistent oil viscosity, which reduces engine component wear and the risk for oil starvation

** Comparisons based on API SQ, ILSAC GF-7B requirements, and/or dexos™1 Gen3*

AVAILABLE PACKAGE SIZES

MULTI-GRADE OIL
SAE 0W-16

ULTRA-LOW VISCOSITY PART NUMBERS

VISCOSITY	PACKAGE SIZE	ITEM NO.	MATERIAL NO.
0W-16	55 Gal. Drum	55016	303004175008
	6 Gal. BIB	60016	303004175033
	3 x 5 Qt. Case	53016	303004175189
	5 Qt. Bottle	51016	
	6 x 1 Qt. Case	06016	303004175115
	1 Qt. Bottle	01016	

ULTRA-LOW VISCOSITY — TYPICAL PROPERTIES**

ASTM TESTS		SAE GRADE
		0W-16
D445	Viscosity	
	cSt @ 40˚C	36.1
	cSt @ 100˚C	7.2
D2270	Viscosity Index	184
D5293	Cold Crank Simulator	
	cP @ -35˚C	4,136
D5481	HTHS, cP @ 150˚C	2.3
D92	Flash Point ˚C (˚F)	226 (440)
D97	Pour Point ˚C (˚F)	-45 (-49)
D4052	Density @ 15˚C, g/mL	0.8354

**Properties are typical and may vary.

Scan here for additional product info.

To learn more about LSPI, scan here.

HIGH PERFORMANCE MOTOR OIL EUROPEAN FORMULA

Royal Purple High Performance Motor Oil European Formulation SAE 0W-40, 5W-30 and 5W-40 are formulated exclusively with premium synthetic base stocks and advanced additive technology to deliver trusted engine protection and peak vehicle performance. Royal Purple European Formulation motor oils provide excellent resistance to sludge and varnish deposits during stop-and-go driving and other severe operating conditions. Recommended for use in European passenger car gasoline/petrol engines, and light duty diesel engines including turbocharged and direct injection diesel engines with a diesel particulate filter (DPF) and selective catalysts. Premium synthetic formulation delivers excellent oxidation stability and low volatility properties, resulting in reduced oil consumption between services.

+ **BETTER WEAR PROTECTION**
  Protects engine components from wear beyond the requirements of API and ACEA specifications
+ **INCREASED FUEL EFFICIENCY**
  A low coefficient of friction results in optimized fuel efficiency
+ **SUPERIOR LOW-TEMPERATURE PERFORMANCE**
  Low-temperature flow ensures lubrication and protection for cold starts
+ **SUPERIOR CORROSION PROTECTION**
  No rust observed in standard industry testing
+ **EXCELLENT OXIDATION STABILITY**
  Long lubricant life; meets or exceeds the oil change intervals for most Euro passenger cars

Scan here for additional product info.

AVAILABLE PACKAGE SIZES

MULTI-GRADE OIL
SAE 0W-40, 5W-30 & 5W-40

EURO FORMULATION — TYPICAL PROPERTIES*

ASTM TESTS		SAE GRADE		
		0W-40	5W-30	5W-40
	API Service	SP	SN	SP
	ACEA Service	A3/B4-21	C3-21	A3/B4-21
D445	Viscosity			
	cSt @ 40˚C	64.4	67.9	77.8
	cSt @ 100˚C	12.9	11.6	13.0
D2270	Viscosity Index	206	167	169
D92	Flash Point ˚C (˚F)	219 (426)	236 (456)	232 (450)
D97	Pour Point ˚C (˚F)	-48 (-54)	-45 (-49)	-45 (-49)
D5293	Cold Crank Simulator			
	cP @ -35˚C	5,988	—	—
	cP @ -30˚C	—	5,661	5,309
D2896	TBN, mg KOH/g	12.9	8.7	12.4
D5481	HTHS, cP @ 150˚C	4.0	3.8	3.8

*Properties are typical and may vary.

EURO FORMULATION PART NUMBERS

VISCOSITY	PACKAGE SIZE	ITEM NO.	MATERIAL NO.
0W-40	55 Gal. Drum	55484	301897175008
	6 Gal. BIB	60040	301897175033
	6 x 1 Qt. Case	06484	301897175115
	1 Qt. Bottle	11484	
5W-30	6 Gal. BIB	11913	303104175033
	3 x 5 Qt. Case	11912	303104175189
	5 Qt. Bottle	11911	
	6 x 1 Qt. Case	11910	303104175115
	1 Qt. Bottle	11909	
5W-40	55Gal. Drum	55540	300968175008
	6 Gal. BIB	60540	300968175033
	5 Gal. Pail	05540	300968175017
	6 x 1 Qt. Case	06540	300968175115
	1 Qt. Bottle	01540	

HMX® PREMIUM SYNTHETIC HIGH MILEAGE MOTOR OIL

Royal Purple HMX® is specifically formulated with a state-of-the-art additive chemistry containing robust zinc/phosphorus anti-wear additives to minimize wear and restore lost engine performance. HMX is chemically enhanced to revitalize hardened seals, reducing oil consumption common in higher mileage engines. Stout detergents remove engine deposits and maintain cleanliness promoting engine longevity. HMX also provides outstanding LSPI protection for those high-use, high-mileage, late-model engines that recommend API service SN, SN Plus, and SP performance.

Royal Purple advanced and proprietary Synerlec technology provides an exceptional film strength increase compared to other engine oils. The protection provided by Synerlec dramatically reduces metal-to-metal contact and frictional wear, helping to extended engine life and restore lost engine performance. Synerlec also provides outstanding oxidation resistance to safely extend oil drains, and an ionic attraction to metal components providing unmatched cold-start wear protection.

+ **BETTER WEAR PROTECTION**
  Prevents valve-train and chain wear beyond both GM dexos™1* and API SP specifications
+ **SUPERIOR DEPOSIT CONTROL**
  Powerful detergents and anti-oxidants clean-up deposits and help prevent new deposit formation
+ **INCREASED PROTECTION AGAINST LSPI**
  Advanced additive chemistry helps reduce Low Speed Pre-Ignition in today's turbocharged Gasoline Direct Injection engines
+ **OUTSTANDING EMISSIONS EQUIPMENT PROTECTION**
  Proprietary additive chemistry minimizes poisoning of catalytic converter
+ **IMPROVED COMPATIBILITY WITH FUELS CONTAINING ETHANOL**
  Proprietary additive technology prevents the white sludge and lubrication starvation that can occur with higher concentration gasoline-ethanol blends
+ **EXCELLENT SEAL COMPATIBILITY**
  Keeps seals and gaskets pliable, minimizing oil leaks

**dexos™1 is a registered trademark of General Motors LLC.*

PLEASE NOTE: Royal Purple HMX meets API Service SP performance requirements for gasoline engines. We recommend this product for any four-cycle gasoline engine with 75,000 miles (120,000 km) or more.

HMX — TYPICAL PROPERTIES**

ASTM TESTS		SAE GRADE			
		0W-20	5W-20	5W-30	10W-30
D445	Viscosity				
	cSt @ 40˚C	43.3	46.5	62.8	71.8
	cSt @ 100˚C	8.4	8.4	10.9	11.7
D2270	Viscosity Index	173	158	166	158
D5293	Cold Crank Simulator				
	cP @ -35˚C	4,700	—	—	—
	cP @ -30˚C	—	4,100	4,888	—
	cP @ -25˚C	—	—	—	3,836
D2896	TBN, mg KOH/g	7.8	8.9	8.9	9.3
D97	Pour Point ˚C (˚F)	-44 (-47)	-45 (-49)	-45 (-49)	-45 (-49)
D92	Flash Point ˚C (˚F)	219 (426)	221 (430)	230 (446)	224 (436)

**Properties are typical and may vary.

AVAILABLE PACKAGE SIZES

MULTI-GRADE OILS
SAE 0W-20, 5W-20, 5W-30 & 10W-30

HMX PART NUMBERS

VISCOSITY	PACKAGE SIZE	ITEM NO.	MATERIAL NO.
0W-20	6 Gal. BIB	11902	303046175033
	3 x 5 Qt. Case	11904	303046175189
	5 Qt. Bottle	11903	
	6 x 1 Qt. Case	11901	303046175115
	1 Qt. Bottle	11900	
5W-20	3 x 5 Qt. Case	37518	301906175189
	5 Qt. Bottle	17518	
	6 x 1 Qt. Case	67511	301906175115
	1 Qt. Bottle	17511	
5W-30	3 x 5 Qt. Case	11749	301445175189
	5 Qt. Bottle	11748	
	6 x 1 Qt. Case	11745	301445175115
	1 Qt. Bottle	11744	
10W-30	3 x 5 Qt. Case	11751	301147175189
	5 Qt. Bottle	11750	
	6 x 1 Qt. Case	11747	301147175115
	1 Qt. Bottle	11746	

Scan here for additional product info.

HPS® SYNTHETIC HIGH PERFORMANCE STREET MOTOR OIL

Royal Purple HPS® series motor oil is specifically formulated to maximize performance and meet the demands of high performance and modified engines. HPS is recommended for vehicles no longer under manufacturer warranty and for those seeking a higher level of performance and protection.

Royal Purple HPS oils are fortified with a high level of zinc/phosphorus anti-wear additive and a generous dose of Royal Purple proprietary Synerlec additive technology. These unique formulations enable HPS oils to outperform leading synthetic and conventional lubricants in both gasoline and diesel engines. HPS meets ACEA E9-16.

+ **OUTSTANDING WEAR PROTECTION**
  Protection against engine wear that is unmatched by any other street engine oil
+ **INCREASED POWER**
  Greater lubricity and low coefficient of friction plus better piston ring seal results in more power to the wheels
+ **EXCEPTIONAL OXIDATION STABILITY**
  Extends oil life, allows for more miles driven between oil changes
+ **SUPERIOR HIGH-TEMPERATURE PERFORMANCE**
  Synthetic base oils and Synerlec technology resist thermal degradation
+ **GREATER CLEANLINESS**
  Advanced synthetic solvency reduces engine deposits and keeps engines clean
+ **INCREASED ENGINE PROTECTION**
  Reduces Low Speed Pre-Ignition (LSPI) in turbocharged Gasoline Direct Injection (GDI) engines

Scan here for additional product info.

AVAILABLE PACKAGE SIZES

MULTI-GRADE OILS

SAE 5W-20, 5W-30, 10W-30, 10W-40 & 20W-50

All HPS viscosities are formulated for gasoline and diesel engine use.

HPS — TYPICAL PROPERTIES*

ASTM TESTS		SAE GRADE				
		5W-20	5W-30	10W-30	10W-40	20W-50
D445	Viscosity					
	cSt @ 40˚C	43.9	46.4	53.6	70.4	122.2
	cSt @ 100˚C	8.6	11.09	10.88	13.36	18.06
D2270	Viscosity Index	173	191	189	192	164
D5293	Cold Crank Simulator					
	cP @ -30˚C	4,060	5,480	—	—	—
	cP @ -25˚C	—	—	3,608	4,971	—
	cP @ -15˚C	—	—	—	—	5,027
D5481	HTHS, @ 150˚C, cP	2.7	3.8	3.8	4.4	5.2
D2896	TBN, mg KOH/g	9.7	9.7	9.7	9.9	9.6
D97	Pour Point ˚C (˚F)	-48 (-54)	-44 (-48)	-48 (-54)	-48 (-54)	-45 (-49)
D92	Flash Point ˚C (˚F)	216 (420)	224 (436)	213 (416)	218 (424)	224 (436)

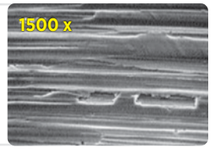
*Properties are typical and may vary.

HPS PART NUMBERS

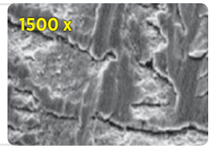
VISCOSITY	PACKAGE SIZE	ITEM NO.	MATERIAL NO.
5W-20	55 Gal. Drum	37520	301072175008
	6 x 1 Qt. Case	36520	301072175115
	1 Qt. Bottle	31520	
5W-30	55 Gal. Drum	37530	301150175008
	5 Gal. Pail	35530	301150175017
	6 x 1 Qt. Case	36530	301150175115
	1 Qt. Bottle	31530	
10W-30	5 Gal. Pail	35130	301899175017
	6 x 1 Qt. Case	36130	301899175115
	1 Qt. Bottle	31130	
10W-40	55 Gal. Drum	37140	301901175008
	5 Gal. Pail	35140	301901175017
	6 x 1 Qt. Case	36140	301901175115
	1 Qt. Bottle	31140	
20W-50	55 Gal. Drum	37250	301443175008
	6 x 1 Qt. Case	36250	301443175115
	1 Qt. Bottle	31250	

BEARING COMPARISON

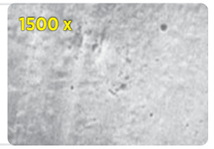
A new bearing surface appears smooth until magnified 1500X.



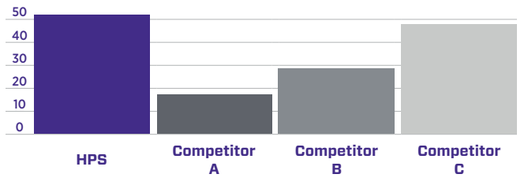
The bearing is scuffed after using a leading synthetic motor oil.



The bearing is visibly smoother after using Royal Purple HPS.



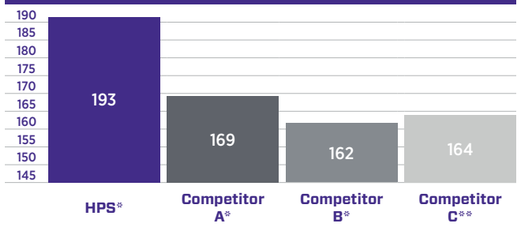
Film Strength (Max PSI) ASTM D-2782
(Comparative SAE 5W-30s)*



Film strength is the oil's ability to withstand a load without being displaced by pressure. Film strength is very important in areas designed to have full hydrodynamic lubrication (HDL) such as the crankshaft and rod/main bearings. A lack of film strength leads to greater metal-to-metal contact and wear throughout the engine. High film strength is key in performance engines and/or forced induction engines which see more severe operation and a higher rate of crank flex.

*Testing performed 2016-2019 by Southwest Research Institute.

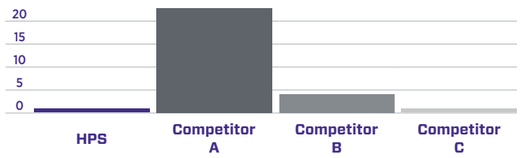
Viscosity Index ASTM D-2270
(Comparative SAE 5W-30s)



Viscosity Index (VI) indicates the oil's change in viscosity with changing temperature, and is calculated using viscosity measurements at 40C and 100C. Less change in viscosity results in a higher VI. An oil with a higher viscosity index provides better lubricity and greater protection across all operating temperatures, thickening less when cold and thinning less when hot.

*Information gathered from manufacturers' websites. **Testing performed 2016-2019 by Southwest Research Institute

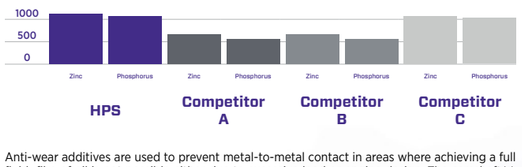
Shear Stability ASTM D-6278
(Comparative SAE 5W-30s)*



Shear stability is the oil's ability to resist permanent viscosity loss. Low quality base oils and/or low quality VI polymers result in oils that can shear very quickly. This viscosity loss increases mechanical wear rates due to a thinner and weaker lubricant film between mating surfaces. Also, as the viscosity decreases, oil operating temperatures can rise due to decreased lubricity and greater metal contact, resulting in an increased rate of oxidation and overall degradation of the oil. Further, as the oil shears the added friction robs horsepower and efficiency.

*Testing performed 2016-2019 by Southwest Research Institute.

Anti-Wear Elements
(Comparative SAE 5W-30s)*



Anti-wear additives are used to prevent metal-to-metal contact in areas where achieving a full fluid film of oil is not possible either due to excessive load or engine design. The camshaft(s) and lifters as well as piston skirts are key examples of areas relying heavily upon anti-wear metals. Performance engines, particularly, need higher quality and increased amounts of anti-wear additives due to greater loads on the camshaft caused by higher ramp rate camshafts and higher springs pressures.

*Testing performed 2016-2019 by Southwest Research Institute.

MAX-CYCLE® SYNTHETIC MOTORCYCLE OIL

Royal Purple Max-Cycle® is specifically formulated to exceed the demands of highly stressed engines and transmissions. It is recommended for use in both air-cooled and liquid-cooled 4-cycle engines and is compatible with wet-clutch transmissions.

Formulated with select synthetic base oils and Royal Purple proprietary Synerlec additive technology, Max-Cycle provides improved film strength when compared to the leading synthetic and mineral oil. Its shear stability and oxidation resistance promotes greater performance and protection.

+ **GREATEST WEAR PROTECTION**
  Protection against engine wear that is unmatched by any commercially available engine oil
+ **SUPERIOR HIGH-TEMPERATURE PERFORMANCE**
  Premium synthetic base oils and Synerlec technology resist thermal degradation
+ **LOWER CYLINDER TEMPERATURES**
  Reduced metal-to-metal contact and friction resulting in observed 25°F to 44°F temperature reduction measured at the cylinder
+ **OUTSTANDING WET CLUTCH PERFORMANCE**
  Minimizes clutch slippage, even in high power applications

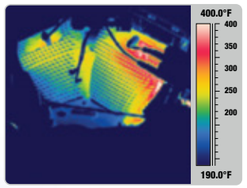
Scan here for additional product info.

AVAILABLE PACKAGE SIZE

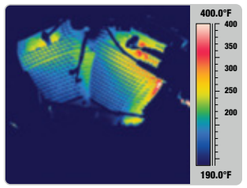
MULTI-GRADE OILS
SAE 10W-40 & 20W-50

REDUCES HEAT

Improved combustion and reduced friction help to prevent overheating and to extend the life of the oil and the engine. In an independent test conducted on an American-made V-Twin motorcycle, engine temperatures were reduced 25˚F to 44˚F just by switching to Royal Purple. See graphics below:



Thermal imaging results with factory synthetic oil



Thermal imaging results after switching to Max-Cycle

MAX-CYCLE PART NUMBERS

VISCOSITY	PACKAGE SIZE	ITEM NO.	MATERIAL NO.
10W-40	6 x 1 Qt. Case	06315	301069175115
	1 Qt. Bottle	01315	
20W-50	6 x 1 Qt. Case	06316	301890175115
	1 Qt. Bottle	01316	

MAX-CYCLE — TYPICAL PROPERTIES*

ASTM TESTS		SAE GRADE	
		10W-40	20W-50
D445	Viscosity		
	cSt @ 40˚C	92.1	165
	cSt @ 100˚C	14.0	20.1
D2270	Viscosity Index	155	141
D5293	Cold Crank Simulator		
	cP @ -25˚C	5,341	—
	cP @ -15˚C	—	4,491
D2896	TBN, mg KOH/g	9.6	9.5
D92	Flash Point ˚C (˚F)	204 (400)	213 (415)
D6892	Pour Point ˚C (˚F)	-49 (-56)	-26 (-15)
D4683	HTHS, cP @ 150˚C	3.9	5.1

*Properties are typical and may vary.

ENGINE BREAK-IN OIL

Royal Purple Engine Break-In Oil is specifically formulated to provide outstanding wear protection while allowing a quick break-in period for newly built and rebuilt engines. Engine builders have grown increasingly concerned that current engine oils that are API licensed for new cars and trucks do not provide adequate wear protection for freshly built performance engines, particularly those using flat tappet camshafts and lifters. Royal Purple has addressed this issue with Royal Purple Engine Break-In Oil.

Royal Purple Engine Break-In Oil is formulated to provide the critical wear protection needed by the engine valve train and camshaft while allowing new piston rings to quickly seat to the engine cylinder walls. Engine Break-In Oil combines highly refined mineral base oils (preferred for engine break-in) with an advanced additive package containing elevated levels of zinc/phosphorus anti-wear additive to optimize wear protection during the sensitive engine break-in phase.

Royal Purple Engine Break-in Oil is a fully formulated conventional SAE 10W-30 engine oil and does not require the use of any other chemical additives. We recommend using Engine Break-In Oil for a minimum of 500 - 1,000 miles in street driven gasoline engines to assure that the piston rings are properly seated to the cylinder walls before switching to one of our full synthetic engine oils. If need be, you can use for up to 3,000 miles. Once break-in of the engine is complete, Royal Purple HPS for street use and light competition, or Royal Purple XPR for competition use (or simply to get the ultimate in performance and protection), are recommended.

BREAK-IN OIL PART NUMBERS

VISCOSITY	PACKAGE SIZE	ITEM NO.	MATERIAL NO.
10W-30	6 x 1 Qt. Case	06487	301439175115
	1 Qt. Bottle	11487	

BREAK-IN OIL — TYPICAL PROPERTIES*

ASTM TESTS		SAE GRADE
		10W-30
	API Service	SJ**
D445	Viscosity	
	cSt @ 40˚C	78.0
	cSt @ 100˚C	12.0
D2270	Viscosity Index	149
D97	Pour Point ˚C (˚F)	-42 (-45)
D92	Flash Point ˚C (˚F)	204 (400)
D5293	Cold Crank Simulator, cP	
	cP @ -25˚C	4,854
D2896	TBN, mg KOH	9.1

*Properties are typical and may vary.
**Unlicensed engine oil; exceeds performance requirements of API SJ specification

AVAILABLE PACKAGE SIZE

MULTI-GRADE OIL
SAE 10W-30

Scan here for additional product info.

HP 2-C™ SYNTHETIC 2-CYCLE MOTOR OIL

Royal Purple HP 2-C™ is a high performance engine oil that improves performance and reduces wear in both standard and high performance 2-cycle gasoline engines.

Royal Purple HP 2-C is recommended for use in both pre-mixed and oil injected gasoline 2-cycle engines in outboard motors, motorcycles, jet skis, chain saws, etc. For cold weather oil injected applications, we recommend Snow 2-C.

The ashless formulation and synthetic solvency of HP 2-C keeps spark plugs and exhaust ports clean for maximum engine efficiency. HP 2-C is formulated with Royal Purple proprietary, synthetic Synerlec additive technology that protects rings, bearings and cylinder walls from metal-to-metal contact and guards against scuffing, galling and welding, which can occur in severe conditions. This engine cleanliness combined with the low coefficient of friction of Royal Purple HP 2-C promotes increased horsepower and engine speed. Engines operate with greater combustion efficiency and go longer between overhauls when lubricated with HP 2-C. Meets or exceeds API TC, JASO FD, and NMMA TCW3 performance requirements.

+ **GREATEST WEAR PROTECTION**
  Protection against engine wear that is unmatched by any commercially available engine oil
+ **INCREASED POWER**
  Premium synthetic base oils and Synerlec technology improve ring seal and reduce operating friction
+ **SUPERIOR RUST & CORROSION PROTECTION**
  Top ratings in iron and copper alloy corrosion tests
+ **COOLER & CLEANER OPERATION**
  Ashless formula burns cleanly and reduces deposits

AVAILABLE PACKAGE SIZES

HP 2-C PART NUMBERS

PACKAGE SIZE	ITEM NO.	MATERIAL NO.
3 x 1 Gal. Case	43311	302011175195
1 Gal. Bottle	04311	
6 x 1 Qt. Case	06311	302011175115
1 Qt. Bottle	01311	

Scan here for additional product info.

HP 2-C — TYPICAL PROPERTIES*

	ASTM TESTS	
D445	Viscosity	
	cSt @ 40˚C	46.0
	cSt @ 100˚C	7.5
D2270	Viscosity Index	129
D92	Flash Point ˚C (˚F)	116 (240)
D6892	Pour Point ˚C (˚F)	-45 (-49)
D92	Copper Corrosion @ 100˚C	1A
D665	Rust Test	
	Fresh Water	Pass
	Salt Water	Pass

*Properties are typical and may vary.

SNOW 2-C™ SYNTHETIC 2-CYCLE SNOWMOBILE MOTOR OIL

Royal Purple Snow 2-C™ is a high performance 2-cycle engine oil that improves performance and reduces wear in both standard and high performance 2-cycle snowmobile gasoline engines. The synthetic solvency of Snow 2-C keeps spark plugs and exhaust ports clean for maximum engine efficiency. This engine cleanliness, combined with Snow 2-C's low coefficient of friction promotes increased horsepower and engine speed.

Snow 2-C is formulated with Royal Purple proprietary, synthetic Synerlec additive technology that protects rings, bearings and cylinder walls from metal-to-metal contact and guards against scuffing, galling and welding, which can occur in severe conditions. Snow 2-C is ideally suited for snowmobile applications due to its low temperature fluidity and pumpability for cold weather service. Suitable for oil-injected and pre-mix applications. Meets or exceeds API TC, JASO FD, and NMMA TCW3 performance requirements.

+ **GREATEST WEAR PROTECTION**
  Protection against engine wear that is unmatched by any commercially available engine oil
+ **INCREASED POWER**
  Premium synthetic base oils and Synerlec technology improve ring seal and reduce operating friction
+ **COOLER & CLEANER OPERATION**
  Ashless formula burns cleanly and reduces deposits
+ **SUPERIOR COLD TEMPERATURE OPERATION**
  High Viscosity Index and a very low Pour Point ensures excellent fluidity in severe cold

AVAILABLE PACKAGE SIZE

SNOW 2-C — TYPICAL PROPERTIES*

	ASTM TESTS	
D445	Viscosity	
	cSt @ 40˚C	46.0
	cSt @ 100˚C	8.4
D2270	Viscosity Index	162
D5293	Cold Crank Simulator	
	cP @ -3˚F	5,300
D92	Flash Point ˚C (˚F)	132 (270)
D6892	Pour Point ˚C (˚F)	-51 (-60)
D92	Copper Corrosion @ 100˚C	1A
D665A	Rust Test, Fresh Water	Pass

*Properties are typical and may vary.

SNOW 2-C PART NUMBERS

PACKAGE SIZE	ITEM NO.	MATERIAL NO.
3 x 1 Gal. Case	43511	301468175195
1 Gal. Bottle	04511	

Scan here for additional product info.

Duralec® is a complete line of high performance lubricants specifically developed for all of your light duty truck and fleet vehicle needs. Duralec products offer synthetic technology and are the most advanced lubricants in the market today.

DURALEC SUPER DIESEL MOTOR OIL WITH SYNTHETIC TECHNOLOGY

Duralec Super motor oil is a high performance synthetic engine oil made for those diesel engines requiring the use of an emissions compliant oil for the 2007 and 2010 emissions equipment such as: DPF's, Catalytic Converters, EGR, and SCR injection with the ultra low sulfur diesel fuels found in North America and Europe.

Duralec Super motor oil is specifically formulated to maximize component life and improve fuel performance with excellent high temperature break down resistance and low temperature pumpability to minimize cold-induced startup wear.

+ **GREATEST WEAR PROTECTION**
  Prevents wear of piston rings, valve train, and other components beyond CK-4 requirements
+ **LONGER OIL DRAIN INTERVALS**
  Enhanced oxidation resistance reduces oil aging, acidity build-up, and viscosity increase
+ **REDUCED EXHAUST EMISSIONS**
  Highly stable and protective formula improves cylinder seal and protects emissions equipment
+ **OUTSTANDING DEPOSIT CONTROL**
  Keeps engines cleaner, ensuring maximum performance
+ **LOW ASH FORMULATION**
  Satisfies requirements of engines requiring the use of API CK-4 and CJ-4 reduced SAPS specifications

Scan here for additional product info.

DURALEC SUPER — TYPICAL PROPERTIES*

	ASTM TESTS	SAE GRADE/API SERVICE		
		5W-40 CK-4	10W-30 CK-4	15W-40 CK-4
D445	Viscosity			
	cSt @ 40˚C	93.3	81.9	108
	cSt @ 100˚C	15.2	12.1	15.2
D2270	Viscosity Index	172	144	146
D92	Flash Point ˚C (˚F)	224 (435)	223 (434)	234 (454)
D97	Pour Point ˚C (˚F)	-48 (-54)	-45 (-49)	-45 (-49)
D5293	Cold Crank Simulator, cP	6370 @ -30˚C	6087 @ -25˚C	4628 @ -20˚C
D2896	TBN, mg KOH/g	10.1	9.3	10
D874	Sulfated Ash, wt%	1	0.99	0.98

*Properties are typical and may vary.

AVAILABLE PACKAGE SIZES

MULTI-GRADE OILS
SAE 5W-40, 10W-30 & 15W-40

DURALEC SUPER PART NUMBERS

VISCOSITY	PACKAGE SIZE	ITEM NO.	MATERIAL NO.
5W-40	55 Gal. Drum	87540	301204490008
	6 Gal. BIB	86540	301204490033
	3 x 1 Gal. Case	80540	301204490195
	1 Gal. Bottle	83540	
10W-30	55 Gal. Drum	87130	300993490008
	5 Gal. Pail	85130	300993490017
	3 x 1 Gal. Case	80130	300993490195
	1 Gal. Bottle	83130	
15W-40	55 Gal. Drum	55154	300905490008
	6 Gal. BIB	60154	300905490033
	5 Gal. Pail	05154	300905490017
	3 x 1 Gal. Case	43154	300905490195
	1 Gal. Bottle	04154	
	6 x 1 Qt. Case	06154	300905490115
	1 Qt. Bottle	01154	

COMMERCIAL LUBRICANTS

DURALEC®

DURALEC ULTRA DIESEL MOTOR OIL WITH SYNTHETIC TECHNOLOGY

Duralec Ultra combines premium base oils with Royal Purple proprietary additive technology, Synerlec, to create a high-performance motor oil that optimizes engine performance and provides superior protection in rigorous on/off highway applications. Synerlec provides unsurpassed film strength and lubricity - up to 4X more than top competitors.

+ **UNSURPASSED WEAR PROTECTION**
  Elevated anti-wear additive and Synerlec additive technology prevents wear of piston rings, valve train, and other components beyond licensed HD diesel engine oils
+ **OUTSTANDING OXIDATION RESISTANCE**
  Less thermal breakdown allows longer oil drain intervals
+ **INCREASED EFFICIENCY**
  Synthetic base oils and Synerlec additive technology reduce parasitic loss, increasing fuel economy
+ **OUTSTANDING DEPOSIT CONTROL**
  Keeps engines cleaner, ensuring maximum performance
+ **SUPERIOR CORROSION PROTECTION**
  No rust observed in standard industry testing

In addition, advanced synthetic solvency reduces engine deposits and keeps engines clean. The net result is a better performing engine, with reduced downtime and lower cost of ownership.

Scan here for additional product info.

AVAILABLE PACKAGE SIZES

MULTI-GRADE OILS
SAE 10W-30 & 15W-40

DURALEC ULTRA PART NUMBERS

VISCOSITY	PACKAGE SIZE	ITEM NO.	MATERIAL NO.
10W-30	55 Gal. Drum	87456	301440490008
	5 Gal. Pail	85456	301440490017
	3 x 1 Gal. Case	80456	301440490195
	1 Gal. Bottle	83456	
15W-40	55 Gal. Drum	87561	301902490008
	5 Gal. Pail	85561	301902490017
	3 x 1 Gal. Case	80561	301902490195
	1 Gal. Bottle	83561	

DURALEC ULTRA — TYPICAL PROPERTIES

	ASTM TESTS	SAE GRADE/API SERVICE	
		10W-30 CK-4*	15W-40 CK-4*
D445	Viscosity		
	cSt @ 40˚C	71.63	101.13
	cSt @ 100˚C	11.21	14.7
D2270	Viscosity Index	149	151
D92	Flash Point ˚C (˚F)	216 (420)	232 (450)
D97	Pour Point ˚C (˚F)	-48 (-54)	-45 (-49)
D5293	Cold Crank Simulator, cP	4726 @ -25˚C	3672 @ -20˚C
D2896	TBN, mg KOH/g	9.45	9.6
D874	Sulfated Ash, wt%	1.04	1.04
D5481	HTHS, @ 150˚C, cP	3.3	4.1

*Claimed performance; Duralec Ultra is not API CK-4 licensed

RACING OILS

We recognize that no matter what type of racing you do, you require the best protection and performance for your vehicle. From grass roots drifting, drag racing, autocross, go-karts, road racing, to you name it, Royal Purple racing oils turn your racing vehicle into a winner.

XPR® SYNTHETIC EXTREME PERFORMANCE RACING OIL

Royal Purple XPR® oils are formulated specifically for the rigorous demands and severe operating conditions of racing and extreme performance engine applications. These engine oil formulas represent the absolute state-of-the-art in formulation and additive chemistry, providing unmatched protection and performance no matter the type of racing. XPR engine oils are fortified with a high level of zinc/phosphorus anti-wear additive and a generous dose Synerlec.

+ **UNSURPASSED WEAR PROTECTION**
  Elevated anti-wear additive and Synerlec additive technology prevents wear of piston rings, valve train, and other components beyond licensed HD diesel engine oils
+ **OUTSTANDING OXIDATION RESISTANCE**
  Less thermal breakdown allows longer oil drain intervals
+ **INCREASED EFFICIENCY**
  Synthetic base oils and Synerlec additive technology reduce parasitic loss, increasing fuel economy
+ **OUTSTANDING DEPOSIT CONTROL**
  Keeps engines cleaner, ensuring maximum performance
+ **SUPERIOR CORROSION PROTECTION**
  No rust observed in standard industry testing
+ **IMPROVED COMPATIBILITY WITH EXOTIC FUELS**
  Prevents the sludge and dilution by exotic fuels (alcohols and nitromethane)

Call our technical department at 800-437-3188 or email technical@calumet.com for assistance in choosing the racing oil for your specific application.

AVAILABLE PACKAGE SIZES

MULTI-GRADE OILS
SAE 0W-8, 0W-20, 5W-20, 0W-30, 5W-30, 5W-40, 10W-40, 5W-50, 20W-50 & 10W-60

Scan here for additional product info.

RACING OILS

+ XPR 0W-8 is an ultra-light viscosity racing motor oil formulated for use in drag racing, motorcycle sprint racing, etc.
+ XPR 0W-20 & 5W-20 are light viscosity racing motor oils that are excellent for drag racing and kart racing.
+ XPR 0W-30 & 5W-30 are light viscosity racing motor oils that are excellent for drag racing and kart racing.
+ XPR 5W-40 & 10W-40 are designed for marine, oval track and endurance car racing. Capable of withstanding long intervals of extreme heat, these are extremely popular in sprint cars, late models and World of Outlaws racing.
+ XPR 5W-50 & 20W-50 are formulated for running extended periods under extreme pressure and heat. These are used in oval track, marine and drag racing and are very popular in sprint cars, late models, truck pullers and bracket racing.
+ XPR 10W-60 is specifically formulated to increase horsepower and torque in high performance modified and racing engines and is popular in endurance road racing and rallycross.

XPR PART NUMBERS

VISCOSITY	PACKAGE SIZE	ITEM NO.	MATERIAL NO.
0W-8	6 x 1 Qt. Case	06009	301448175115
	1 Qt. Bottle	01009	
0W-20	6 x 1 Qt. Case	06008	301073175115
	1 Qt. Bottle	01008	
5W-20	6 x 1 Qt. Case	06011	301450175115
	1 Qt. Bottle	01011	
0W-30	6 x 1 Qt. Case	06010	301913175115
	1 Qt. Bottle	01010	
5W-30	5 Gal. Pail	05021	300864175017
	6 x 1 Qt. Case	06021	300864175115
	1 Qt. Bottle	01021	
5W-40	6 x 1 Qt. Case	06042	302195175115
	1 Qt. Bottle	01042	
10W-40	55 Gal. Drum	55041	301914175007
	5 Gal. Pail	05041	301914175017
	6 x 1 Qt. Case	06041	301914175115
	1 Qt. Bottle	01041	
5W-50	6 x 1 Qt. Case	06052	302196175115
	1 Qt. Bottle	01052	
20W-50	5 Gal. Pail	05051	301915175017
	6 x 1 Qt. Case	06051	301915175115
	1 Qt. Bottle	01051	
10W-60	6 x 1 Qt. Case	06061	301152175115
	1 Qt. Bottle	01061	

XPR — TYPICAL PROPERTIES*

ASTM TESTS		SAE GRADE									
		0W-8	0W-20	5W-20	0W-30	5W-30	5W-40	10W-40	5W-50	20W-50	10W-60
D445	Viscosity										
	cSt @ 40˚C	27.5	40.7	47.9	47.5	55.1	61.3	77.0	78.2	137	103
	cSt @ 100˚C	5.6	8.9	8.5	10.2	10.6	12.8	13.5	18.7	19.8	22.5
D2270	Viscosity Index	150	209	157	210	187	214	179	262	165	248
D5293	Cold Crank Simulator										
	cP @ -35˚C	2,300	—	—	5,536	—	—	—	—	—	—
	cP @ -30˚C	—	4,112	3,965	—	4,173	4,879		5,835	—	—
	cP @ -25˚C	—	—	—	—	—	—	4,191	—	—	5,460
	cP @ -15˚C	—	—	—	—	—	—	—	—	4,358	—
D2896	TBN, mg KOH/g	9.6	10.2	10.4	9.3	9.7	10.2	10	10.1	9.8	10
D97	Pour Point ˚C (˚F)	-66 (-87)	-62 (-81)	-48 (-54)	-60(-76)	-54 (-65)	-45 (-49)	-43 (-45)	-47 (-54)	-43 (-45)	-42 (-44)
D92	Flash Point ˚C (˚F)	199 (390)	216 (420)	227 (440)	221 (430)	213 (416)	224 (436)	210 (410)	206 (404)	213 (416)	204 (400)

*Properties are typical and may vary.

Royal Purple gear oil has the ability to protect and outperform ordinary oils by combining our proprietary additive technology and friction modifiers. Available in viscosities for automotive and marine applications, our high performance gear oils will provide high performance results that will keep your gears running smoother and longer.

Manual or automatic transmissions, we have you covered. Compatible with other friction materials and transmission fluids, you'll notice the difference the first time you shift.

MAX ATF® AUTOMATIC TRANSMISSION FLUID

Royal Purple Max ATF® is a synthetic, high performance, long life, multi-vehicle automatic transmission fluid. Its superior formulation has optimized viscosity, anti-foaming, and protection against wear and thermal breakdown for 6 to 10 speed transmissions commonly found in late model passenger cars and light trucks.

Max ATF provides excellent torque holding capacity to dramatically reduce slippage and heat generation. Automatic transmissions generate a great deal of heat and depend on the transmission fluid for cooling and protection. More than 90% of all automatic transmission failures are caused by overheating. A 20°F reduction in fluid temperature can double the life of the transmission (Source: Perma Industries Inc.). Max ATF significantly reduces heat to extend the life of your transmission.

Max ATF meets the viscosity and performance requirements of late model automatic transmission fluid specifications and is also hybrid vehicle compatible. For best performance and protection, a complete fluid change is recommended, but Max ATF is completely compatible with OEM transmission fluid specifications (listed below), so partial fluid changes and fluid level top-off are recommended as well.

Aisin ATF-0WS, AW-1, JWS 3324
Audi G052533, G055005A2, G055162A2/A6, G055540A2
BMW ATF 3+, ATF 6, L12108, M1375.4, M1375.6
Chrysler/FCA AW-1, SP-IV, 8&9 Speed ATF, 68218925AA/AB
GM AW-1, DEXRON® VI; DEXRON® HP
Esso LT 71141
Ford MERCON® SP, MERCON® LV
Honda DW-1, ATF Type 3.0 & Type 3.1
Hyundai SP-IV, SP-IV-M1, SPH-IV, SP-IV-RR
JWS 3309, JWS 3314, JWS 3317
Kia SP-IV, SP-IV-M1, SPH-IV, SP-IV-RR
Isuzu SCS
Jaguar 02JDE 26444, Fluid 8432, SCS
JAMA JASO M315, Class-1A-LV
Land Rover LR022460:LV, LR023288/023289
Maserati Oil No. 231603
Mazda ATF-FZ
Mitsubishi Dia Queen ATF-MA1, Dia Queen ATF-PA, SP-IV
Nissan Matic-S, Matic-W
Porsche P/N 000 043 304 00
Saab P/N 93 165 147
Subaru ATF-WS
Suzuki 3324, ATF-WS
Toyota ATF-FZ, ATF WS, JWS 3324
Volvo P/N 31 256 774, P/N 31 256 775
VW G052533, G055005A2, G055162A2/A6, G055540A2
ZF LifeGuard Fluid 6, LifeGuard Fluid 8, LifeGuard Fluid 9

PLEASE NOTE: Max ATF is not suitable for use in CVTs, DCTs, or automatic transmissions that specify the use of Ford Type F ATF.

Dexron® is a registered trademark of General Motors Corporation.
Mercon® is a registered trademark of Ford Motor Company.

AVAILABLE PACKAGE SIZES

MAX ATF PART NUMBERS

PACKAGE SIZE	ITEM NO.	MATERIAL NO.
6 Gal. BIB	61320	301143175033
5 Gal. Pail	05320	301143175017
6 x 1 Qt. Case	06320	301143175115
1 Qt. Bottle	01320	

MAX ATF — TYPICAL PROPERTIES*

	ASTM TESTS	
D445	Viscosity	
	cSt @ 40˚C	29.3
	cSt @ 100˚C	6.0
D2270	Viscosity Index	158
D92	Flash Point ˚C (˚F)	227 (440)
D97	Pour Point ˚C (˚F)	-48 (-54)
D2983	Brookfield Viscosity	
	cP @ -10˚C (14˚F)	550
	cP @ -40˚C (-40˚F)	8,400

*Properties are typical and may vary.

Scan here for additional product info.

SYNCHROMAX® SYNTHETIC MANUAL TRANSMISSION FLUID

Royal Purple Synchromax® is recommended for manual transmissions that specify an automatic transmission fluid or other light-viscosity oil. It is also ideal for transfer cases and 2-cycle motorcycle gear boxes that specify light-viscosity lubricants.

Synchromax is formulated with Royal Purple synthetic, proprietary Synerlec additive technology, offering improved shift quality over a wide temperature range and reduced gear noise.

Synchromax is fully compatible with all types of friction materials and offers excellent corrosion and oxidation protection without affecting the soft metals commonly found in manual transmission synchronizers.

+ **BETTER WEAR PROTECTION**
  Prevents wear of gears and bearings beyond OEM specification requirements
+ **IMPROVED SHIFTING**
  Lowered friction and improved metal surfaces provide smoother and more consistent shift performance
+ **INCREASED EFFICIENCY**
  Increased fuel economy and power benefits due to reduced parasitic loss through the drive train
+ **REDUCED TEMPERATURES**
  Superior separation of metal surfaces and greater lubricity reduces friction and heat generation
+ **SUPERIOR CORROSION PROTECTION**
  No rust observed in standard industry testing

AVAILABLE PACKAGE SIZE

SYNCHROMAX — TYPICAL PROPERTIES*

	ASTM TESTS	
D445	Viscosity	
	cSt @ 40˚C	39
	cSt @ 100˚C	7.5
D2270	Viscosity Index	162
D2983	Brookfield Viscosity	
	cP @ -40˚C (-40˚F)	11,145
D92	Flash Point ˚C (˚F)	207 (405)
D97	Pour Point ˚C (˚F)	-51 (-60)
D130	Copper Corrosion @ 100°C	1A
D130	Copper Corrosion @ 150°C	1B
D892	Foam Stability	0/0/0
D4172	4-Ball Wear, Scar, mm	0.34

*Properties are typical and may vary.

SYNCHROMAX PART NUMBERS

PACKAGE SIZE	ITEM NO.	MATERIAL NO.
6 x 1 Qt. Case	06512	301889175115
1 Qt. Bottle	01512	

MAX GEAR® SYNTHETIC GEAR OIL

AVAILABLE PACKAGE SIZES

Royal Purple Max Gear® is recommended for use in automotive front and rear differentials, manual transmissions and transfer cases that specify use of an API GL-5 or GL-4 fluid. It is noncorrosive to soft yellow metals (brass, bronze, copper), and is synchronizer safe. Max Gear also works great in marine gear applications. Not for use in gear boxes, transmissions and lower units with wet clutches.

Max Gear is an ultra-tough, high performance gear oil designed to provide maximum protection to heavily loaded gears while maximizing power throughout the drivetrain. Max Gear outperforms ordinary gear oils by combining the highest quality synthetic oils with Royal Purple proprietary Synerlec additive technology. Max Gear makes gears run smoother, quieter, cooler and longer without overhauls.

+ **BETTER WEAR PROTECTION**
  Prevents wear of gears and bearings beyond OEM specification requirements
+ **INCREASED EFFICIENCY**
  Increased fuel economy and power benefits due to reduced parasitic loss through the drive train
+ **REDUCED TEMPERATURES**
  Superior separation of metal surfaces and greater lubricity reduces friction and heat generation
+ **EXCELLENT DEMULSIBILITY**
  Separates from water; water contamination of the axle can be drained leaving serviceable gear oil
+ **SUPERIOR CORROSION PROTECTION**
  No rust observed in standard industry testing
+ **IMPROVED SHIFTING**
  Lowered friction and improved metal surfaces provide smoother and more consistent shift performance
+ **LIMITED-SLIP PERFORMANCE**
  Contains optimum concentration of friction modifier needed for limited-slip differentials

MAX GEAR — TYPICAL PROPERTIES*

ASTM TESTS		SAE GRADE			
		75W-90	80W-90	75W-140	85W-140
D445	Viscosity				
	cSt @ 40˚C	100	160	187	313
	cSt @ 100˚C	16.5	17.4	27.5	28.5
D2983	Brookfield Viscosity				
	cP @ -12˚C	—	—	—	22,000
	cP @ -26˚C	—	57,000	—	—
	cP @ -40˚C	65,000	—	135,000	—
D92	Flash Point ˚C (˚F)	163 (325)	177 (350)	191 (375)	177 (350)
D97	Pour Point ˚C (˚F)	-51 (-60)	-39 (-38)	-54 (-65)	-39 (-38)

*Properties are typical and may vary.

MAX GEAR PART NUMBERS

VISCOSITY	PACKAGE SIZE	ITEM NO.	MATERIAL NO.
75W-90	5 Gal. Pail	05300	301894175017
	6 x 1 Qt. Case	06300	301894175115
	1 Qt. Bottle	01300	
80W-90	5 Gal. Pail	05302	301437175017
75W-140	55 Gal. Drum	55301	301070175008
	5 Gal. Pail	05301	301070175017
	6 x 1 Qt. Case	06301	301070175115
	1 Qt. Bottle	01301	
85W-140	6 x 1 Qt. Case	06303	301146175115
	1 Qt. Bottle	01303	

PERFORMANCE ADDITIVES

Royal Purple premium synthetic products go beyond lubrication. Our line of performance additives are formulated to improve performance and fuel economy for gasoline and diesel cars and trucks, powersports vehicles and seasonal equipment.

MAX-CLEAN® FUEL SYSTEM CLEANER & STABILIZER

Royal Purple Max-Clean® is a state-of-the-art high performance fuel system cleaner that maximizes the performance of your fuel system. Max-Clean restores fuel economy by deeply penetrating deposits and cleaning injectors, carburetors, intake valves and combustion chambers.

Royal Purple Max-Clean is EPA/CARB Compliant. Recommended for use in gasoline and diesel engines and can be used with all ethanol blends or biofuel. Max-Clean can be used in both 4-cycle & 2-cycle engines and will not harm vehicle emissions equipment.

+ **RESTORES FUEL ECONOMY**
  Increases miles per gallon vs. dirty injectors
+ **INCREASES DRIVEABILITY**
  Maximizes horsepower and improves engine responsiveness
+ **MITIGATES EFFECTS OF ETHANOL FUELS**
  Reduces damage caused by high-ethanol fuels
+ **INCREASES SHELF-LIFE OF FUELS**
  Allows longer storage of gasoline and ethanol-blend fuels
+ **MULTI-FUEL COMPATIBLE**
  Recommended for gasoline and diesel engines
+ **REDUCED EXHAUST EMISSIONS**
  Improves engine operation and fuel-burn, reducing HC, CO, and NOx emissions
+ **EPA AND CARB COMPLIANT**
  Safe and legal for use in all 50 states

Royal Purple Max-Clean also stabilizes fuel during low-use and storage periods, preventing varnishing of fuel.

MAX-CLEAN PART NUMBERS

PACKAGE SIZE	ITEM NO.	MATERIAL NO.
6 x 20 Oz. Case	11723	300990175256
20 Oz. Bottle	11722	

RECOMMENDED TREAT RATE

Pour entire contents of bottle into nearly empty tank immediately before refueling, then install fuel on top of additive. One (1) can treats up to 20 gallons. For tank sizes outside of this range, use one (1) ounce per gallon. In two-cycle engines, use one (1) ounce per gallon.

RECOMMENDED USAGE

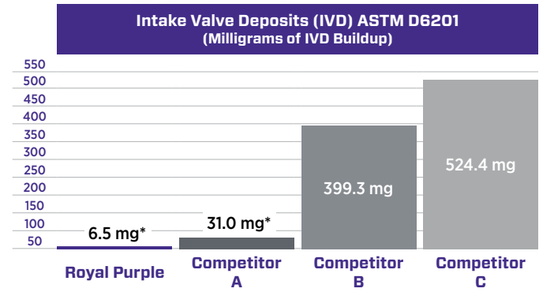
Max-Clean should be used every 10,000 miles or annually, whichever comes first.

The illustration below shows the before and after effects of switching to Max-Clean.

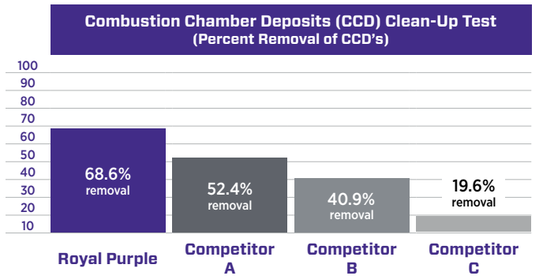
Illustration of before and after effects.

Intake Valve Deposits (IVD's) are formed by oil slowly seeping past the intake valve guide seals and down the valve guides. When oil reaches the hot valve, it sticks and burns, forming black carbon deposits. They also result from unburned fuel vapors and oil vapors siphoning back into the intake manifold through the Positive Crankcase Ventilation (PCV) system. These stubborn deposits are very difficult to remove. As they accumulate, airflow into cylinders is restricted and causes loss of power and fuel economy. Max-Clean prevents IVD's and optimizes performance.

*Testing performed 2020 by Southwest Research Institute.



*Royal Purple/Competitor A pass TOP-TIER IVD spec (Must be <50 mg to pass TOP-TIER)

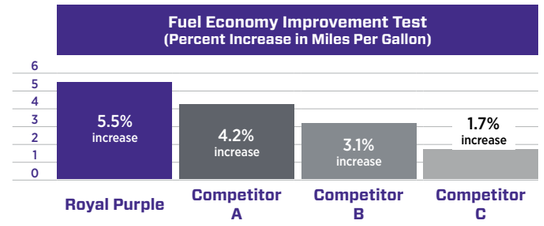


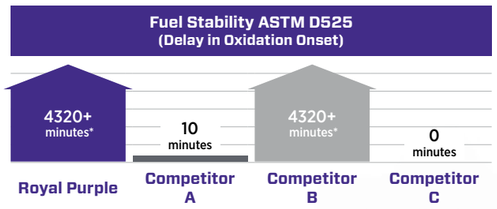
Combustion Chamber Deposits (CCD's) increase the compression ratio of an engine and the octane requirements of the fuel. If the fuel's octane rating is not high enough to compensate for CCD buildup, it results in detonation and build-up of heat/hot-spots that damage head gaskets, piston rings and rod bearings. Knock sensors in modern engines detect detonation and trigger the ECU to retard timing. But this reduces performance and fuel economy, and increases emissions. Max-Clean removes CCD's, relieves octane increase burden, and restores performance.

*Testing performed 2020 by ATD GmbH.

Depending on the nature and severity of IVD's and CCD's, they can reduce fuel economy by an average of 2%-7%, depending on engine type, driving conditions, and type/octane of fuel used. Max-Clean provides a one tank clean-up and is only required once every 10,000 miles of driving. The dollar savings that results from decreased fuel consumption between Max-Clean applications more than offsets its cost – meaning it actually pays for itself.

*Testing performed 2020 by ATD GmbH.





*Test terminates at 4320 minutes

Oxidative stability of hydrocarbons in fuel impacts how quickly they chemically break down to form gums that stick to engine surfaces and coke (bake) into deposits. By delaying/preventing the onset of oxidation, less gums are formed, resulting in fewer deposits. This reduces the clean-up burden of fuel detergents. In this way, fuel stabilizers function synergistically with detergents to maintain total engine cleanliness. Max-Clean stabilizes fuel (especially before/after idle periods) to prevent deposit-forming gums.

*Testing performed 2020 by Southwest Research Institute.

MAX-ATOMIZER™ FUEL INJECTOR CLEANER

Royal Purple Max-Atomizer™ is a highly concentrated, high performance fuel injector cleaner. It is specially formulated to solve problems with today's direct injection engines, but can be used with any type of fuel injection. Max-Atomizer contains highly concentrated polyether amine (PEA) detergents that quickly clean clogged and coked injectors to restore maximum injector flow. This optimizes injector spray patterns and better atomizes fuel as it enters the combustion chamber. The result is improved fuel economy, enhanced power and performance, reduced emissions, smoother idle, and quicker, easier starts. Max-Atomizer is the only fuel injector cleaner that also stabilizes ethanol, which chemically breaks down to cause harmful effects to an engine.

+ **RESTORES FUEL ECONOMY**
  Increased fuel economy by an average of 4.1% vs. dirty injectors
+ **INCREASES DRIVEABILITY**
  Maximizes horsepower; improves engine responsiveness
+ **STABILIZES ETHANOL**
  Helps prevent degradation of gasoline and reduces damages caused by high-ethanol fuels
+ **MULTI-FUEL COMPATIBLE**
  Recommended for gasoline and diesel engines
+ **EPA AND CARB COMPLIANT**
  Safe and legal for use in all 50 states

MAX-ATOMIZER PART NUMBERS

PACKAGE SIZE	ITEM NO.	MATERIAL NO.
12 x 6 Oz. Case	18000	301822175048
6 Oz. Bottle	18000	

RECOMMENDED TREAT RATE

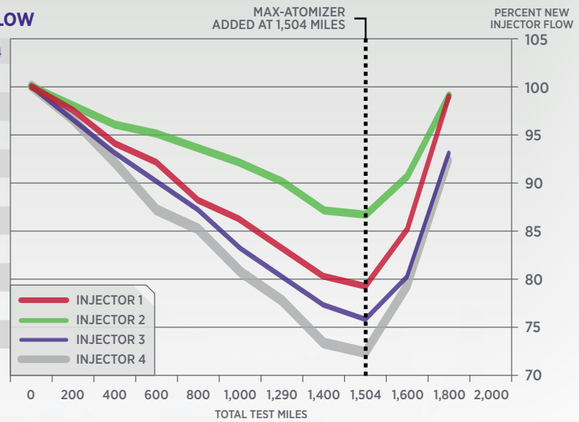
Pour entire contents of bottle into nearly empty tank immediately before refueling, then install fuel on top of additive. Minimum recommended dose is one (1) 6 oz. bottle to 20 gallons of fuel. The maximum effective dose is one (1) 6 oz. bottle to 10 gallons of fuel.

RECOMMENDED USAGE

For best results, use at every fill-up.
Minimum recommended usage is every 3,000 miles.

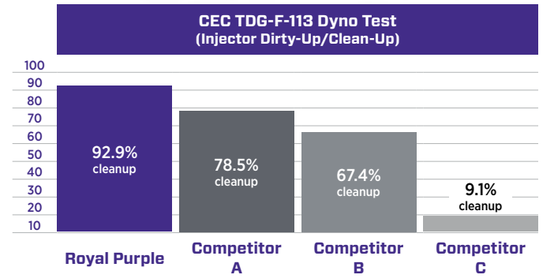
MAX-ATOMIZER RESTORES FUEL INJECTOR FLOW

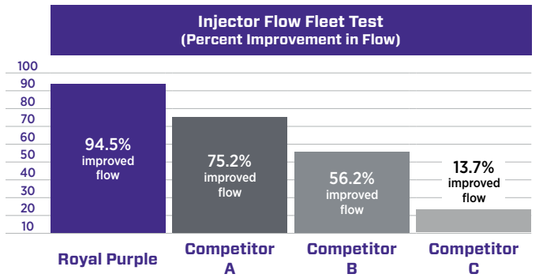
MILEAGE	INJECTOR 1	INJECTOR 2	INJECTOR 3	INJECTOR 4
0	100	100	100	100
200	97.5	98	96.5	96.5
400	94	96	93	92
600	92	95	90	87
800	88	93.5	87	85
1,000	86	92	83	80.5
1,200	83	90	80	77.5
1,400	80	87	77	73
1,504	79	86.5	75.5	72
1,600	85	90.5	80	79
1,800	99	99	93	92.5



Injector deposits form quickly in modern Gasoline Direct Injection (GDI) engines because injectors are located in the combustion chambers. This extreme high-temperature environment cokes (bakes) deposits onto injector nozzles, making them difficult to remove. Even a small amount of deposit on injector tips prevents optimal atomization of fuel, causing performance loss and reduced fuel economy. Max-Atomizer's high flash point allows it to reside in hot combustion chambers longer than other products, resulting in more effective deposit clean-up.

*Testing performed 2020 by ISO 17025 CEC Research Lab.



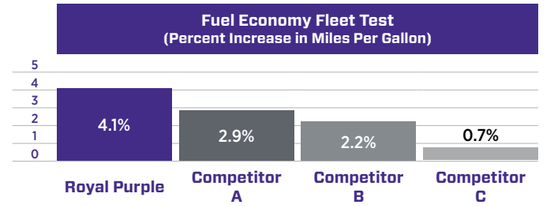


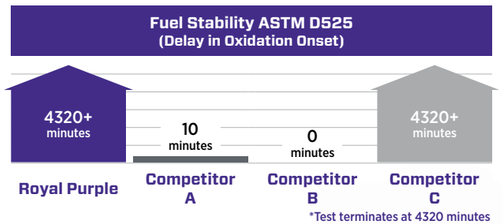
Injector flow rates are reduced when deposits form on the tips of injectors. Fuel Injector Cleaners (FIC's) face a tough task of cleaning/keeping-clean deposit-sensitive injectors. Volatile low-flash point detergents in most additives vaporize before reaching GDI injectors in extremely hot combustion chambers, especially in turbocharged engines. This results in incomplete clean-up, and reduced injector flow. Max-Atomizer improves injector flow rates when tested in BMW GDI turbo engines.

*Testing performed 2020 by ATD GmbH.

Fuel economy is reduced when deposits are formed on injector nozzles. Modern engines have injector nozzles with a higher quantity of smaller holes. This reduces fuel droplet size and better atomizes fuel sprayed into combustion chambers. But smaller nozzle holes also clog easier, especially in GDI engines that are more deposit-prone. Reduced fuel atomization causes loss of power and fuel economy, and increases emissions. Max-Atomizer removes injector deposits and restores optimal injector atomization when tested in BMW GDI turbo engines.

*Testing performed 2020 by ATD GmbH.





*Test terminates at 4320 minutes

Oxidative stability of hydrocarbons in fuel impacts how quickly they chemically break down to form gums that stick to engine surfaces and coke (bake) into deposits. By delaying/preventing the onset of oxidation, less gums are formed, resulting in fewer deposits. This reduces the clean-up burden of fuel detergents. In this way, fuel stabilizers function synergistically with detergents to maintain total engine cleanliness. Max-Atomizer stabilizes fuel (especially before/after idle periods) to prevent deposit forming gums.

*Testing performed 2020 by Southwest Research Institute.

MAX-RESTORE™ HIGH MILEAGE FUEL SYSTEM TREATMENT

Royal Purple Max-Restore™ High Mileage is a highly concentrated, high performance fuel treatment that is specially formulated to solve performance problems typically found in higher mileage vehicles.

Max-Restore contains a high dose of polyether amine (PEA) & proprietary detergents that quickly clean stubborn, long-term deposits, often found in high mileage engines, that clog injectors and provides a protective barrier to keep new deposits from forming. This optimizes the injector spray pattern and better atomizes fuel as it enters the combustion chamber resulting in enhanced power and performance, reduced emissions, smoother idle, and quicker/easier starts. It also utilizes friction modifier to reduce wear in the upper cylinder to help extend engine life and improve fuel economy.

+ **RESTORES FUEL ECONOMY**
  Increased fuel economy by an average of 6% vs. dirty injectors
+ **LOWERS EMISSIONS**
  Cleaned injectors improve combustion, reducing CO, NOx, and unburned hydrocarbons
+ **INCREASED RELIABILITY**
  Provides wear protection in the combustion chamber & reduces damage caused by high-ethanol fuels
+ **MAXIMIZED DEPOSIT REMOVAL**
  Required injection time reduced over 70% vs. dirty injectors (normalized to new injectors)
+ **EPA AND CARB COMPLIANT**
  Safe and legal for use in all 50 states

MAX-RESTORE PART NUMBERS

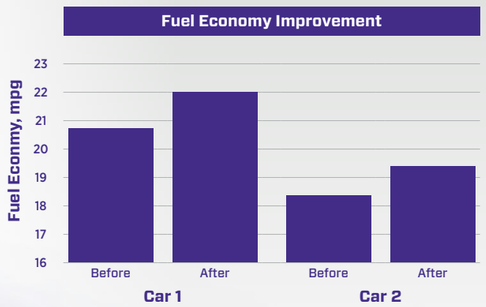
PACKAGE SIZE	ITEM NO.	MATERIAL NO.
6 x 6 Oz. Case	18001	500807175053
6 Oz. Bottle	18001	

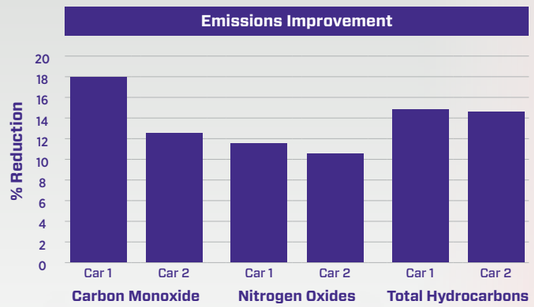
RECOMMENDED TREAT RATE

Pour entire contents of bottle into nearly empty tank immediately before refueling, then install fuel on top of additive. Minimum recommended dose is one (1) 6 oz. bottle to 20 gallons of fuel. The maximum effective dose is one (1) 6 oz. bottle to 10 gallons of fuel.

RECOMMENDED USAGE

For best results, use at every fill-up.
Minimum recommended usage is every 3,000 miles.





MAX-TANE™ ALL-IN-ONE + ALL-SEASON DIESEL ADDITIVE

Royal Purple Max-Tane™ is formulated for year-round use in all types of light, medium and heavy duty diesel engines, and is compatible with any type or grade of diesel fuel, including #1 diesel and #2 diesel, biodiesel and ultra-low-sulfur diesel (ULSD). Max-Tane is specifically formulated to solve problems associated with today's new HPCR (High Pressure Common Rail) diesel injection systems. Safe for use with all types of diesel exhaust emission systems equipment, including diesel particulate filters (DPFs) and catalytic converters. Do not pour into Diesel Exhaust Fluid.

+ **RAISES CETANE BY UP TO 8**
  Significantly increases Cetane rating of fuel when used as directed
+ **INCREASES DRIVEABILITY**
  Maximizes horsepower and improves engine responsiveness
+ **INCREASES FUEL ECONOMY**
  Increases combustability of fuel, resulting in better engine operation
+ **REDUCES COLD-START PROBLEMS**
  Anti-gel and de-icer improve flow of fuel in cold temperatures
+ **CLEANS DEPOSITS**
  Excellent detergency prevents and removes deposits in fuel system and combustion chamber
+ **REDUCES EMISSIONS**
  Treated fuel combusts better, reducing smoke, CO emissions and odor

MAX-TANE PART NUMBERS

PACKAGE SIZE	ITEM NO.	MATERIAL NO.
6 x 20 Oz. Case	06755	301695175256
20 Oz. Bottle	11755	

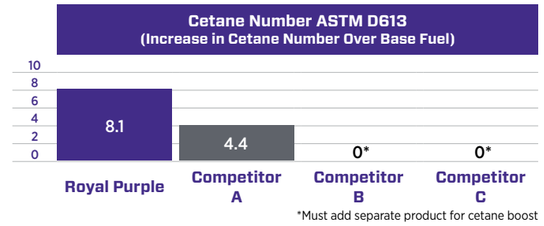
RECOMMENDED TREAT RATE

The minimum recommended dosage is one (1) ounce per five (5) gallons of diesel fuel. High performance applications can safely use one (1) ounce per two (2) gallons of diesel fuel for maximum benefit. If uncertain of exact tank size, round up. Replace cap after bottle has been emptied and dispose of properly.

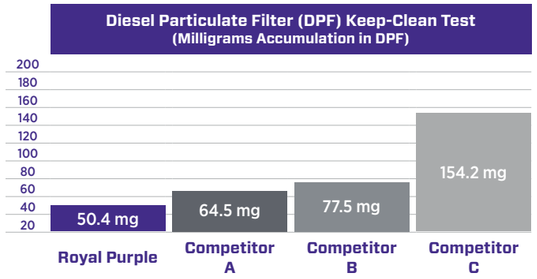
20 Ounces → 100 Gallons
15 Ounces → 75 Gallons
10 Ounces → 50 Gallons
5 Ounces → 25 Gallons

Higher cetane allows quicker ignition of diesel, which boosts power/performance and improves completeness of combustion. With less non-ignited hydrocarbons inside the combustion chamber, deposit formation is reduced. Optimized combustion also results in faster cold startups, smoother and quieter engine operation, reduced downshifts, less soot/black smoke production, reduced emissions, and improved fuel economy. Max-Tane provides maximum cetane boost as it contains 100% active ingredients, and unlike other products is not blended with inactive solvent carriers.

*Testing performed by Intertek Automotive Research.



*Must add separate product for cetane boost

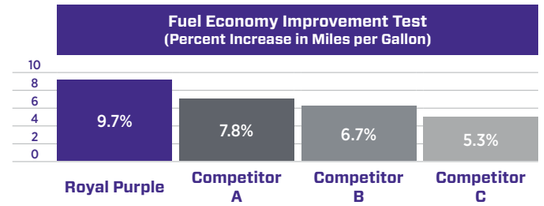


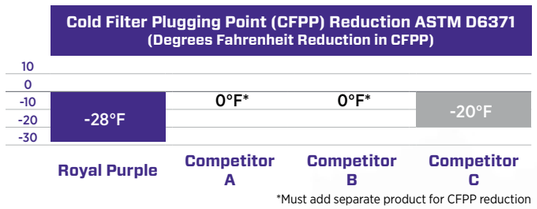
Diesel particulate emissions are captured by the DPF, where they accumulate and cause clogging unless burned off during regeneration cycles. With improved combustion efficiency, less particulate soot accumulates in the DPF, requiring fewer regenerations. Cleaner filters also reduce exhaust backpressure, allowing efficient engine operation and reduced temperatures. Stop-and-go urban driving causes incomplete regenerations, which can require removal/manual cleaning or replacement of DPF. Max-Tane keeps DPFs clean and helps prevent costly downtime resulting from manual cleaning or replacement of DPF.

*Testing performed by ATD GmbH.

High Pressure Common Rail (HPCR) diesel injectors are vulnerable to fuel contaminants due to extremely tight 1-3 micron clearances between injector assemblies and needle plungers. When deposits form, needle plungers stick, resulting in reduced fuel atomization and 5-12% losses in fuel economy. Max-Tane contains potent, diesel-specific detergents that keep HPCR injectors clean and deposit-free. It also contains friction modifiers that prevent sticking of HPCR needle plungers. This allows complete atomization of diesel entering combustion chambers, and restores lost fuel economy.

*Testing performed by ATD GmbH.





*Must add separate product for CFPP reduction

Wax naturally found in diesel forms gels in cold temps, which clogs filters/injectors, and prevents engines from starting. The temperature at which gel begins to clog the fuel filter is the "Cold Filter Plugging Point" or (CFPP). Max-Tane reduces CFPP an average of 28°F., which allows diesels to reliably start/run in the cold temperatures. Max-Tane is the only "All-in-One" additive that combines summer benefits of cetane boost and fuel economy improvement with the winter benefit of CFPP reduction.

*Testing performed by Intertek Automotive Research.

MAX-BOOST™ OCTANE BOOSTER

Royal Purple Max-Boost™ is a high-performance octane booster and fuel treatment that increases gasoline octane, reduces emissions, and enhances engine performance while stabilizing fuel. Max-Boost is formulated with MMT, which delivers the best octane enhancement to help eliminate engine damaging detonation, pre-ignition, and pinging or knocking from low octane gasoline.

Max-Boost is formulated for engines equipped with carburetors, port fuel injection and direct injection, as well as turbocharged, supercharged and nitrous-injected engines. Safe for use in leaded and unleaded gasolines, and alternate fuels like gasohol, reformulated gasoline, and all ethanol blends. Max-Boost is safe for oxygen sensors and catalytic converters.

+ **INCREASES OCTANE BY 3 NUMBERS OR 30 POINTS**
  Increases safety margin in modified/tuned engines
+ **PROTECTS AGAINST ENGINE DAMAGE**
  Reduces pinging and likelihood of detonation and pre-ignition
+ **RESTORES LOST ECONOMY & POWER**
  Reduces need for ignition-retard in computer controlled engines
+ **INCREASES DRIVEABILITY**
  Maximizes horsepower and improves engine responsiveness

MAX-BOOST PART NUMBERS

PACKAGE SIZE	ITEM NO.	MATERIAL NO.
6 x 16 Oz. Case	06757	301697175039
16 Oz. Bottle	11757	

RECOMMENDED TREAT RATE

One can treats up to 25 gallons of gasoline. Do not exceed 2 oz. of Max-Boost per gallon of fuel. Pour entire can into tank before fill-up. Clean immediately if spills occur, as product can permanently stain painted surfaces. Do not expose liquid to direct or indirect sunlight. Replace cap after can has been emptied, and dispose of properly.

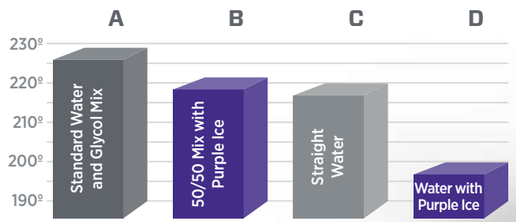
PLEASE NOTE: Max-Boost is a racing formula and is not street legal. Call our technical department at 800-437-3188 or email technical@calumet.com for more information.

PURPLE ICE™ COOLING SYSTEM OPTIMIZER

Royal Purple Purple Ice™ is a high performance radiator conditioner. Its advanced 2-in-1 corrosion inhibitor and wetting agent provides year-round defense against corrosion and reduces the surface tension of the radiator coolant to help reduce engine temperatures.

REDUCED COOLANT TEMPERATURES

Extensive testing confirms Purple Ice reduces coolant temperatures better than comparable products while providing extra corrosion protection. For example, the average operating temperature of a 350 c.i.d. V8 engine (equipped with 160˚F thermostat) when dyno-tested with different coolants are:



A. Standard mix of water and glycol (antifreeze) — 228˚F
B. 50/50 water/glycol mix with Purple Ice added — 222˚F
C. Straight water (no corrosion protection) — 220˚F
D. Water with Purple Ice added — 200˚F

+ **COOLER OPERATION**
  Provides lower, more consistent coolant temperatures under severe operation and towing
+ **REDUCES PRE-IGNITION**
  Helps prevent hot spots in the engine and cylinder heads, reducing the possibility of engine failure
+ **LESS OVERHEATING**
  Provides lower and more consistent coolant temperatures under severe operation and towing
+ **HIGH COOLANT COMPATIBILITY**
  Chemically compatible with OEM and aftermarket glycol-based antifreeze coolants
+ **TRACK LEGAL AND ENVIRONMENTALLY SAFE**
  Purple Ice is water-based and contains no glycol

PURPLE ICE PART NUMBERS

PACKAGE SIZE	ITEM NO.	MATERIAL NO.
12 x 12 Oz. Case	12600	500214175050
12 Oz. Bottle	01600	

RECOMMENDED TREAT RATE

+ For 50/50 antifreeze/water coolant mixture, use 1 oz. of Purple Ice per quart of coolant
+ For low antifreeze concentration and straight water coolant*, use 2 oz. of Purple Ice per quart of coolant

** Purple Ice provides no freeze protection, use an appropriate amount of antifreeze for local winter weather and cold temperatures*

SPECIALTY LUBRICANTS

We offer a variety of synthetic Synerlec infused lubricants for a wide range of uses in both the DIY garage and home.

MAX EZ® POWER STEERING FLUID

Royal Purple Max EZ® is an advanced power steering fluid designed to maximize the life and performance of all power steering units. Max EZ is formulated with a blend of select synthetic base oils plus Royal Purple's proprietary Synerlec additive technology, which is proven to make equipment run cooler, longer, quieter and more efficiently. Max EZ is compatible and can be mixed with any OEM or stock replacement power steering fluid and has excellent seal compatibility.

+ **GREATER WEAR PROTECTION**
  Prevents wear of hydraulic and steering system components beyond OEM specification requirements
+ **REDUCED TEMPERATURES**
  Superior separation of metal surfaces and greater lubricity reduces friction and heat generation
+ **EXCELLENT ANTI-FOAMING**
  Advanced chemistry helps prevent foam generation and quickly reduce any foam that is created
+ **SUPERIOR CORROSION PROTECTION**
  No rust observed in standard industry testing
+ **OUTSTANDING HIGH TEMPERATURE PERFORMANCE**
  Maintains viscosity and long fluid life even under severe operating conditions, like off-road operation and heavily loaded vehicle
+ **INCREDIBLE LOW TEMPERATURE FLOW**
  With a pour point below -40˚F, power steering will operate properly even on the coldest days

MAX EZ PART NUMBERS

PACKAGE SIZE	ITEM NO.	MATERIAL NO.
12 x 12 Oz. Case	12326	301145175050
12 Oz. Bottle	01326	

MAX EZ — TYPICAL PROPERTIES*

	ASTM TESTS	
D445	Viscosity	
	cSt @ 40˚C	48.0
	cSt @ 100˚C	8.50
D2270	Viscosity Index	153
D92	Flash Point ˚C (˚F)	204 (400)
D97	Pour Point ˚C (˚F)	-45 (-49)

*Properties are typical and may vary.

MAX-CHAIN® SYNTHETIC CHAIN LUBRICANT

Royal Purple Max-Chain® is an advanced, high performance, synthetic lubricant that provides excellent protection for chains, open gears and exposed metal surfaces subjected to severe loading — even in dusty, wet, acidic environments.

Max-Chain is a unique, thixotropic lubricant blended with a solvent carrier. When applied, Max-Chain penetrates the rollers, pins and bushings of the chain, then the carrier evaporates leaving a tenacious, dry, wax-like film. This non-tacky film effectively minimizes the collection of abrasive dust and other airborne contaminants. The EP properties of Max-Chain greatly reduce wear and effectively extend equipment life. Max-Chain is suitable for operating temperatures up to 400°F (after carrying solvent has evaporated) and provided excellent protection against rust and corrosion. Max-Chain uses a non-petroleum CO2 propellant.

+ **SUPERIOR WEAR PROTECTION**
  Advanced anti-wear and EP additives greatly reduce wear and chain stretch
+ **DRY, NON-TACKY FILM**
  Applies wet and dries to a wax-like EP film; does not attract abrasive particles
+ **EXCELLENT CORROSION PROTECTION**
  Prevents surface rust, and rust between chain pins, rollers and bushings

Max-Chain should be used in an up-right position to maximize aerosol propellant life.

MAX-CHAIN — TYPICAL PROPERTIES*

	ASTM TESTS	
D445	Viscosity	
	cSt @ 40˚C	4.90
	cSt @ 100˚C	1.70
D92	Aerosol Flash ˚C (˚F)	102 (215)

*Properties are typical and may vary.

MAX-CHAIN PART NUMBERS

PACKAGE SIZE	ITEM NO.	MATERIAL NO.
12 x 11 Oz. Case	12330	500133175261
11 Oz. Can	05330	

MAXFILM® SYNTHETIC PENETRATING LUBRICANT

Royal Purple MaxFilm® is a high film strength, multipurpose, synthetic lubricant/penetrant that excels in a wide array of applications. MaxFilm deeply penetrates and loosens rusted parts. Once applied, its solvent carrier evaporates and leaves a tenacious, thixotropic lubricating film on all metal surfaces, providing long-lasting protection against wear, rust and corrosion.

MaxFilm contains Royal Purple proprietary Synerlec additive technology, which is proven to make equipment run smoother, cooler, quieter, longer and more efficiently. MaxFilm uses a non-petroleum (CO2) propellant.

MAXFILM IS RECOMMENDED FOR:

+ Loosening stuck parts such as nuts, bolts, locks, hinges, etc.
+ Lubrication of power tools, hinges, chains, rollers, open gears, fishing tackle, lawn equipment, etc.
+ Preserving and protecting parts in storage, disassembled machinery parts, wire ropes, etc., against rust and corrosion

For best results, shake MaxFilm well before each use and use the can in an upright position to maximize aerosol propellant life.

MAXFILM PART NUMBERS

PACKAGE SIZE	ITEM NO.	MATERIAL NO.
12 x 11 Oz. Case	15000	500262175261
11 Oz. Can	05000	

MAXFILM — TYPICAL PROPERTIES*

	ASTM TESTS	
D445	Viscosity	
	cSt @ 40˚C	7.6
	cSt @ 100˚C	2.3
D2270	Viscosity Index	118
D92	Aerosol Flash ˚C (˚F)	102 (215)

*Properties are typical and may vary.

ULTRA PERFORMANCE™ GREASE

Royal Purple Ultra Performance™ Grease (UPG) is a high performance, multi-purpose, aluminum-complex, synthetic extreme pressure grease which significantly increases bearing life and equipment reliability. It also makes bearings run smoother, cooler and quieter.

UPG is an excellent choice for a wide range of applications including bearings, U-joints, greased suspension components, and general purpose use. It offers outstanding extreme pressure performance and excellent resistance to emulsion with water and water wash-out. UPG is stable at high temperatures. It also has excellent oxidation resistance for extended service life and to provide a margin of safety between lubrication intervals.

+ **SUPERIOR HIGH TEMPERATURE PERFORMANCE**
  Aluminum complex thickener provides a high dropping point and high temperature stability to the grease
+ **OUTSTANDING WEAR PROTECTION**
  Synslide™ additive technology imbues UPG with unmatched lubricant film strength, preventing metal-to-metal contact
+ **EXCEPTIONAL WATER RESISTANCE**
  UPG will not mix with water and has great resistance to water wash off, making it an excellent choice for wet applications like wheel bearings and suspension components subject to wet environments (off-road, boat trailers, etc.)
+ **REDUCED VIBRATION**
  The tough lubricating film provided to Ultra-Performance Grease by Synslide coupled with its ability to micro-mend contacting bearing elements provides superior bearing lubrication
+ **GREATER CORROSION PROTECTION**
  Advanced anti-corrosion additives along with the aluminum complex thickener provide unmatched corrosion protection for the lubricated components

UPG — TYPICAL PROPERTIES*

	ASTM TESTS	
	Thickener Type	Al Complex
D217	Worked Penetration	280
D445	Base Oil Viscosity	
	cSt @ 40˚C	180
D2265	Dropping Point ˚C (˚F)	274 (525)
D2596	4-Ball EP Test, Weld Load, kg	400
D2596	4-Ball EP Test, Load Wear Index	65.2
D1743	Rust Protection	Pass
D4048	Copper Corrosion, 24 hr, 100 ˚C	1B
D1264	Water Washout, 79 ˚C, %	4.5
FTMS 791B	Oil Separation, %	<5
D5800	Useful Temp. Range ˚C (˚F)	-40 to 177 (-40 to 350)

*Properties are typical and may vary.

AVAILABLE PACKAGE SIZES

NLGI GRADE
2

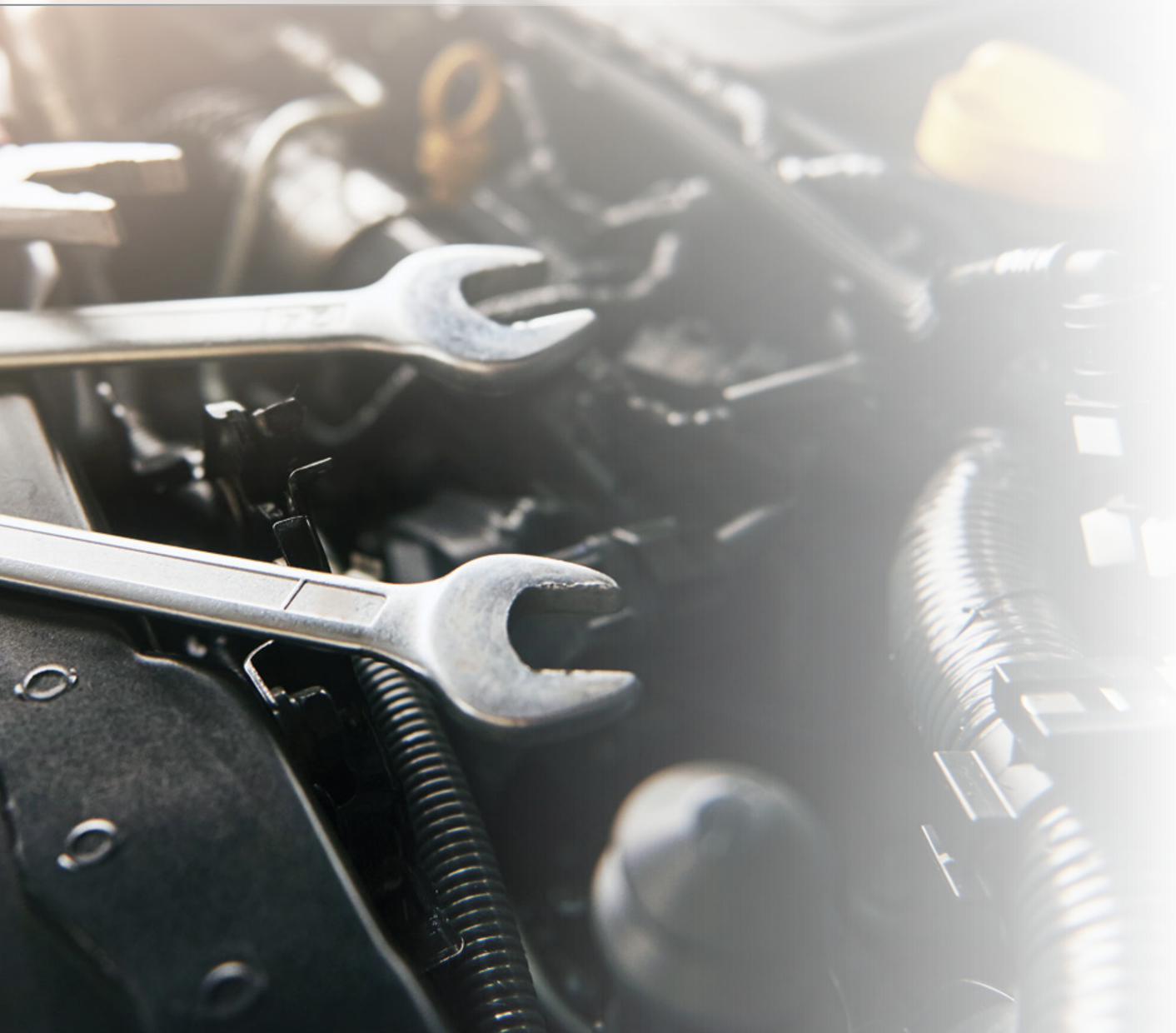
UPG PART NUMBERS

PACKAGE SIZE	ITEM NO.	MATERIAL NO.
30 x 14.1 Oz. Case	10069	301961175235
14.1 Oz. Tube	01312	

FAQS

Get the answers to frequently asked questions about our most popular products.

Scan here for the entire list of FAQs



MOTOR OILS

Can I use HPS in my diesel engine?

Absolutely. All viscosities of HPS are formulated for use in gas and/or diesel engines and are ideal for those with modified diesels or those simply looking for more performance out of their diesel.

Are Royal Purple oils compatible with other motor oils?

Yes. Royal Purple lubricants are fully compatible with mineral or synthetic oils. No special procedures are necessary when switching to Royal Purple lubricants. We recommend against intentionally creating a mixture of different brands or product lines of engine oils.

Do Royal Purple products maintain their purple color after it's put into service?

No. The dye that's used to color the oil dissipates shortly after being put into service. The oil will appear brown at some point.

Is HMX different from your High Performance engine oils?

Yes, HMX is fortified with Royal Purple proprietary Synerlec additive technology as well as additional seal conditioners beneficial to higher mileage engines to maintain elasticity of gaskets and seals.

Why should I use a high mileage oil?

A properly formulated High Mileage oil like HMX will help reduce oil consumption and restore lost power. HMX is chemically enhanced to revitalize hardened seals reducing oil consumption common in higher mileage engines.

TRANSMISSION & GEAR OILS

Can I use your Max ATF in my transmission?

Check your owner's manual for verification. A complete list of warranty applications can be found on page 26.

FUEL ADDITIVES

What happens when fuel breaks down?

It forms non-combustible gums that form deposits in fuel systems/combustion chambers, which decreases engine performance/fuel economy and increases emissions.

Will Max-Clean rejuvenate old fuel?

No, but it will prevent it from degrading any further, and allow it to be safely used without forming engine deposits.

How long does Max-Clean stabilize fuel?

When used at our recommended dosages, Max-Clean will stabilize fuels with less than 10% ethanol for up to 2 years. For fuels containing 10% or greater ethanol content, Max-Clean will stabilize for up to 1 year.

With what fuels does Max-Clean work?

Max-Clean is suitable for use in all liquid automotive-type fuels, including gasoline, ethanol, diesel, and biodiesel.

Can Max-Clean be used in modern, fuel injected engines?

Yes, it will not harm catalytic converters or oxygen sensors, and will clean/remove deposits in port injected, direct injected, and carbureted engines.

What makes Max-Tane any better than other diesel fuel treatments?

Royal Purple Max-Tane is better than any other consumer diesel additive because it does the job of every other consumer diesel fuel additive. Max-Tane is a cetane booster, a fuel lubricity enhancer, a fuel anti-gel, fuel system and injector cleaner and improves fuel economy up to 10%. Royal Purple Max-Tane effectively replaces up to 4 other diesel fuel additive products.

What types of fuels is Max-Tane intended for?

Royal Purple Max-Tane is formulated for use in any diesel-type vehicular fuel including #1 and #2 diesel, biodiesel, and ultra-low sulfur diesel fuels.

How does Max-Atomizer improve engine performance?

It cleans injectors and restores proper flow, which optimizes injector spray patterns and better atomizes fuel as it enters the combustion chamber.

Can Max-Atomizer be used in fuel with ethanol?

Yes, it can be used in any gasoline and ethanol blend (E5, E10, E15, E85, etc.), and it provides the additional benefit of ethanol stabilization.

How is Max-Atomizer different than Max-Clean?

Max-Atomizer is a stand-alone fuel injector cleaner. Max-Clean offers the injector cleaning of Max-Atomizer and also provides cleaning of piston crowns and combustion chambers, fuel stabilization, and demulsification of water from ethanol-containing fuels.

How is Max-Restore High Mileage Fuel System Treatment different than Max Atomizer or Max-Clean?

The Royal Purple Max Restore is based on similar technology as the Max Atomizer and Max-Clean, but the Max Restore contains an additional proprietary detergent that allows it to clean stubborn, long-term, legacy deposits that clog injectors and provides a protective barrier to keep new deposits from forming.

COOLING SYSTEM ADDITIVES

Is Purple Ice compatible with other cooling system additives?

Purple Ice should not be used with other heat-transfer or cooling enhancing products or "water wetters". If such a product has been used in the cooling system, the system should be drained and flushed before using Purple Ice.

Purple Ice is compatible with cooling system additives intended to stop or slow leaks. Please note that such stop-leak products often typically put a coating on the interior surfaces of the cooling system, so the effects of Purple Ice may be diminished.

Can Purple Ice be used in diesel engines?

Yes. Purple Ice may be used in diesel engines for improved heat transfer as well as reduced cavitation.

PRODUCT RECOMMENDATIONS

GENERAL APPLICATIONS

This is a general outline. Always follow manufacturer's recommendations for oil viscosities or call our technical department at 800-437-3188 or email technical@calumet.com for more information.

AUTOMOTIVE

ENGINES

Gasoline	High Performance Motor Oils
Diesel	Duralec Super 5W-40 Duralec Super 10W-30 Duralec Super 15W-40
European Passenger Car & Small Diesel	High Performance European Formula

TRANSMISSIONS

Automatic	Max ATF
Manual	Synchromax
Heavy Duty Manual	Max Gear 75W-90 HPS 10W-30

POWER STEERING

Power Steering	Max EZ

REAR ENDS

Heavy Duty	Max Gear 75W-90 Max Gear 75W-140
Light Truck & Passenger Car	Max Gear 75W-90 Max Gear 75W-140

4-CYCLE MOTORCYCLE

LIQUID COOLED JAPANESE

Engine	Max-Cycle 10W-40
Shaft Drive	Max Gear 75W-90

LIQUID COOLED EUROPEAN

Engine	Max-Cycle 10W-40
Shaft Drive	Max Gear 75W-90

AIR/OIL COOLED METRIC

Engine	Max-Cycle 20W-50 Max-Cycle 10W-40
Shaft Drive	Max Gear 75W-90

AIR/OIL COOLED DOMESTIC

Buell Engine	Max-Cycle 20W-50
Transmission	Max-Cycle 10W-40
H/D Sportster	
Engine	Max-Cycle 20W-50
H/D Evo/TwinCam	
Engine	Max-Cycle 20W-50
Transmission	Max Gear 75W-90 Max-Cycle 20W-50
Primary	Max-Cycle 10W-40 Max-Cycle 20W-50

OFF-ROAD/DUAL SPORT: 2-CYCLE, 4-CYCLE

2-CYCLE

Engine	
Pre-mix	HP 2-C
Racing	
Oil Injection	HP 2-C
Transmission	Synchromax

4-CYCLE

Engine	Max-Cycle 10W-40 Max-Cycle 20W-50
Transmission	
- Separate Tank	Synchromax Max-Cycle 10W-40
Final Drive - Shaft	Max Gear 75W-90

AIR/OIL COOLED METRIC

Engine	Max-Cycle 10W-40 Max-Cycle 20W-50
Final Drive - Shaft	Max Gear 75W-90

MX MOTORCYCLE & ATV: 2-CYCLE, 4-CYCLE

4-CYCLE

Engine	Max-Cycle 10W-40
Transmission	
- Separate Tank	Synchromax Max-Cycle 10W-40
Final Drive - Chain	Max-Chain
Final Drive - Shaft	Max Gear 75W-90
2-Cycle	
Engine	
Pre-mix and Oil Injection	HP 2-C
Transmission	Synchromax
Final Drive - Chain	Max-Chain
Shaft Drive	Max Gear 75W-90

PERSONAL WATER CRAFT

4-CYCLE

Engine	HPS 10W-30 HPS 10W-40
Outdrive/Lower Unit	Max Gear 75W-90

2-CYCLE

Engine	
Pre-mix and Oil Injection	HP 2-C
Outdrive/Lower Unit	Max Gear 75W-90

MARINE APPLICATIONS

BOATS

Inboard	
4-Cycle Gasoline Engine	HPS 10W-30 HPS 10W-40
4-Cycle Diesel Engine	Duralec Super 10W-30 Duralec Super 15W-40 HPS 10W-40
Outdrive/Lower Unit	Max Gear 75W-90
Outboard	
4-Cycle Engine	HPS 10W-30 HPS 10W-40
2-Cycle Engine	
Pre-mix	HP 2-C
Oil Injection	HP 2-C
Lower Unit	Max Gear 75W-90

SNOWMOBILE & SNOW MACHINE

4-CYCLE

Engine	Max-Cycle 10W-40
Transmission/Chain Case	Synchromax HPS 5W-30 Max-Cycle 10W-40

2-CYCLE

Engine	
Pre-mix	HP 2-C
Oil Injection	Snow 2-C
Transmission/Chain Case	Synchromax

GENERAL MAINTENANCE

Pivots, Cables, Oiled Bearings	MaxFilm
Trailer (wheel bearings)	Ultra Performance Grease

PRODUCT RECOMMENDATIONS

HIGH PERFORMANCE & RACING APPLICATIONS

This is a general outline. Always follow manufacturer's recommendations for oil viscosities or call our technical department at 800-437-3188 or email technical@calumet.com for more information.

AUTOMOTIVE

ENGINES

Drag Racing	HPS 10W-30 HPS 10W-40 HPS 20W-50 XPR 0W-8 XPR 0W-20 XPR 0W-30 XPR 5W-40 XPR 5W-50
Midgets	XPR 0W-30 XPR 5W-40 XPR 5W-50
Sprint Cars	XPR 0W-30 XPR 5W-40 XPR 5W-50
Late Models	HPS 10W-30 HPS 10W-40 HPS 20W-50 XPR 0W-30 XPR 5W-40 XPR 5W-50
Road Racing	HPS 10W-30 HPS 10W-40 HPS 20W-50 XPR 0W-30 XPR 5W-40 XPR 5W-50 XPR 10W-60
Super Speedway	XPR 0W-20 XPR 5W-40

AUTOMOTIVE

AUTO TRANSMISSIONS

	Max ATF

MANUAL TRANSMISSIONS

	Max Gear 75W-90 Synchromax

DIFFERENTIALS

	Max Gear 75W-90 Max Gear 75W-140

KARTS

ENGINES

2-Cycle	HP 2-C
4-Cycle	XPR 0W-20 XPR 0W-30

CHAINS

	Max-Chain

MARINE

ENGINES

2-Cycle	HP 2-C
4-Cycle	HPS 10W-30 HPS 10W-40 XPR 0W-30 XPR 5W-40 Max-Cycle 20W-50

MOTORCYCLE & ATV

ENGINES

2-Cycle	
Pre-mix and Oil Injection	HP 2-C
4-Cycle	
- Gas	XPR 0W-20 XPR 0W-30 XPR 5W-40 XPR 5W-50
- Liquid Cooled	XPR 0W-8 XPR 0W-20 XPR 0W-30 XPR 5W-40 Max-Cycle 10W-40
- Air/Oil Cooled	XPR 5W-50 Max-Cycle 20W-50
- N2O & Exotic Fuel	XPR 0W-20 XPR 5W-40

TRANSMISSION

Separate Tank	Synchromax Max-Cycle 10W-40 Max-Cycle 20W-50 XPR 0W-30 XPR 5W-30 XPR 5W-40 XPR 5W-50

FINAL DRIVE

Shaft	Max Gear 75W-90

SNOW MACHINE

ENGINES

2-Cycle Pre-mix or Mod. Oil Injection	HP 2-C Snow 2-C
2-Cycle stock Oil Injection	XPR 0W-20 XPR 0W-30
4-Cycle	XPR 5W-40

TRANSMISSIONS/CHAIN CASES

	Synchromax

TRANSMISSION LUBRICANT CROSS REFERENCE

This is a general outline. Always follow manufacturer's recommendations for oil viscosities or call our technical department at 800-437-3188 or email technical@calumet.com for more information.

TRANSMISSION	LUBRICANT SPEC/ PART NUMBER	ROYAL PURPLE PRODUCT RECOMMENDATION
AUTOMATIC TRANSMISSION		
See Max ATF Specs Page 26		
MANUAL TRANSMISSION		
Manual Transmission/ Transaxle	Spec ATF's	Synchromax
Manual Transmission/ Transaxle	75W-90, 80W-90, 80W, 90W GL-4 or GL-5	Max Gear 75W-90
Manual Transmission/ Transaxle	75W-90, 80W-90 GL-3	HPS 10W-40 or XPR 5W-40
Bert & Brinn		Synchromax
Liberty & G-Force		Synchromax
APPLICATION	**OEM SPEC #/PART #**	**RECOMMENDED**
AUDI/VW	G-052-145	Max Gear 75W-90
BMW/MINI 1983 – 1992: Inspect for color-coded label - typically affixed to passenger side of transmission	Green Label (Mobil SHC 630) Red Label (Dexron III) No Label (80W GL-4) 1993 – 1997 (Dexron III) 1998 & up (Mobil SHC 630) Esso MTF-LT-1, MTF-LT-2 MTF LT-3, MTF-LT-4, MTF-94 Castrol SAF-XJ (limited-slip) Castrol SAF-XO	Max Gear 75W-90 Synchromax HPS 5W-30 Synchromax Max Gear 75W-90 Synchromax Synchromax Max Gear 75W-90 XPR 5W-20 Max Gear 75W-140 Max Gear 75W-90

TRANSMISSION	LUBRICANT SPEC/ PART NUMBER	ROYAL PURPLE PRODUCT RECOMMENDATION
APPLICATION	**OEM SPEC #/PART #**	**RECOMMENDED**
CHRYSLER/JEEP	75W-90 GL-3 04873167 04874459 04874464 04874465 04874469 05179014AA Mopar C635 DDCT Trans Fluid, 75W MS-9224 MS-9417 NV4500 5-spd (75W-85) Viper Trans, 1993 (DEX III) Viper Trans, 1994 –2006 (75W-85) Viper Trans, 2008 & up (ATF+4)	HPS 10W-40 Synchromax Max Gear 75W-90 Synchromax Synchromax Max Gear 75W-140 Synchromax Synchromax Synchromax Synchromax Max Gear 75W-90 Synchromax Max Gear 75W-90 Synchromax
FORD MOTOR CO.	ESP-M2C166-H Mercon F32Z 19C547 XL-12 XT-2-QSM XT-5-QM XT-M5-QS XT-11-QDC	Synchromax Max Gear 75W-90 Synchromax Synchromax Synchromax HPS 10W-40 Synchromax
GENERAL MOTORS	SAE 80W-90 GM 1052931 GM 12345349 (Synchromesh) GM 12345577 GM 12346190 (SynTorque LT) GM 1235977 GM 12377916 (Synchromesh) GM 12378261 GM 12378396	Max Gear 75W-90 HPS or XPR 5W-30 Synchromax Synchromax Max Gear 75W-90 Max Gear 75W-90 Synchromax Max Gear 75W-90 Synchromax

TRANSMISSION LUBRICANT CROSS REFERENCE

This is a general outline. Always follow manufacturer's recommendations for oil viscosities or call our technical department at 800-437-3188 or email technical@calumet.com for more information.

TRANSMISSION	LUBRICANT SPEC/ PART NUMBER	ROYAL PURPLE PRODUCT RECOMMENDATION
APPLICATION	OEM SPEC #/PART #	RECOMMENDED
GENERAL MOTORS	GM 12378505	Synchromax
	GM 12378508	Synchromax
	GM 12378514	Synchromax
	GM 12378515	Synchromax
	GM 12378557 (QuadraSteer)	Max Gear 75W-90
	GM 19256084	Synchromax
	GM 19259104	HPS or XPR 5W-30
	GM 21018899	HPS or XPR 5W-30
	GM 88861800	Synchromax
	GM 88862472 or 88862473	HPS or XPR 5W-30
	GM 88900402	Synchromax
	GM 89021677	Max Gear 75W-90
	GM 89021806	HPS or XPR 5W-40
	GM 92184900 (Castrol SAF Carbon Mod)	Max Gear 75W-90
	AutoTrak II	Synchromax
	BOT 0063	HPS or XPR 5W-30
	MTF 0063	HPS or XPR 5W-30
	Saab 12799117	HPS or XPR 5W-30
	Saturn 21005966	Synchromax
	Saturn MTF	HPS or XPR 5W-30
	VersaTrak fluid	Synchromax
HONDA/ACURA	Honda MTF # 08798-9031	HPS or XPR 5W-20 Synchromax
	Acura MTF # 08798-9031A	HPS or XPR 5W-20 Synchromax
	Honda MTF # 08798-9016	HPS or XPR 5W-30
	Acura MTF # 08798-9016A	HPS or XPR 5W-30
HYUNDAI	SAE 75W-85 (6-spd manual)	HPS or XPR 10W-40, XPR 5W-40

TRANSMISSION	LUBRICANT SPEC/ PART NUMBER	ROYAL PURPLE PRODUCT RECOMMENDATION
APPLICATION	OEM SPEC #/PART #	RECOMMENDED
JAGUAR/LAND ROVER	Shell TF 0753	Synchromax
	Shell Spirax TS 90	Max Gear 75W-90
	Castrol SAF XO	Max Gear 75W-90
	Castrol SAF Carbon Mod	Max Gear 75W-90
MERCEDES BENZ/ SMART CAR	MB 000 989 2603	Synchromax
	MB 001 989 2603	Synchromax
	MB 001 989 1703 (Hypoid Gear Oil)	Max Gear 75W-90
	Shell ATF 3403 M115	Max ATF
	NAG1	Max ATF
	Fuchs ATF 3353	Max ATF
	Castrol Manual BOT 328	Max Gear 75W-90
MITSUBISHI	Texaco MTX Fluid FM	XPR 5W-20
NISSAN	Castrol SAF-XJ	Max Gear 75W-140
	Nissan Trans Oil R35 Special	Synchromax
PORSCHE	000 043 300 38	Synchromax
	000 043 304 71	HPS or XPR 10W-40, XPR 5W-40
	000 043 300 37	Max Gear 75W-90
	Castrol BOT 338 (75W-80)	Synchromax
	Shell Spirax S5 ATF (75W-90)	HPS or XPR 10W-40, XPR 5W-40
	Burmah Carbon Mod (75W-90)	Max Gear 75W-90
TOYOTA	V-160, 08885-01306	Synchromax
	('93 & up Turbo Supra)	
	Toyota Genuine LF Gear Oil	Synchromax

MOTOR OIL

HIGH PERFORMANCE – MULTI-GRADE

SAE 0W-20	55 Gal. Drum	55020
	6 Gal. BIB	60020
	5 Gal. Pail	05020
	3 x 5 Qt. Case	53020
	5 Qt. Bottle	51020
	6 x 1 Qt. Case	06020
	1 Qt. Bottle	01020
SAE 5W-20	55 Gal. Drum	55520
	6 Gal. BIB	60520
	5 Gal. Pail	05520
	3 x 5 Qt. Case	53520
	5 Qt. Bottle	51520
	6 x 1 Qt. Case	06520
	1 Qt. Bottle	01520
SAE 5W-30	55 Gal. Drum	55530
	6 Gal. BIB	60530
	5 Gal. Pail	05530
	3 x 5 Qt. Case	53530
	5 Qt. Bottle	51530
	6 x 1 Qt. Case	06530
	1 Qt. Bottle	01530
SAE 10W-30	5 Gal. Pail	05130
	3 x 5 Qt. Case	53130
	5 Qt. Bottle	51130
	6 x 1 Qt. Case	06130
	1 Qt. Bottle	01130

HIGH PERFORMANCE – STRAIGHT GRADE

SAE 30	6 x 1 Qt. Case	06030
	1 Qt. Bottle	01030
SAE 40	6 x 1 Qt. Case	06040
	1 Qt. Bottle	01040
SAE 50	5 Gal. Pail	05050
	6 x 1 Qt. Case	06050
	1 Qt. Bottle	01050

HIGH PERFORMANCE – ULTRA-LOW

SAE 0W-16	55 Gal. Drum	55016
	6 Gal. BIB	60016
	3 x 5 Qt. Case	53016
	5 Qt. Bottle	51016
	6 x 1 Qt. Case	06016
	1 Qt. Bottle	01016

MOTOR OIL

HIGH PERFORMANCE – EUROPEAN FORMULA

SAE 0W-40	55 Gal. Drum	55484
	6 Gal. BIB	60040
	6 x 1 Qt. Case	06484
	1 Qt. Bottle	11484
SAE 5W-30	6 Gal. BIB	11913
	3 x 5 Qt. Case	11912
	5 Qt. Bottle	11911
	6 x 1 Qt. Case	11910
	1 Qt. Bottle	11909
SAE 5W-40	55 Gal. Drum	55540
	6 Gal. BIB	60540
	5 Gal. Pail	05540
	6 x 1 Qt. Case	06540
	1 Qt. Bottle	01540

HMX – HIGH MILEAGE MOTOR OIL

SAE 0W-20	6 Gal. BIB	11902
	3 x 5 Qt. Case	11904
	5 Qt. Bottle	11903
	6 x 1 Qt. Case	11901
	1 Qt. Bottle	11900
	1 Qt. Bottle	17511
SAE 5W-20	3 x 5 Qt. Case	37518
	5 Qt. Bottle	17518
	6 x 1 Qt. Case	67511
	1 Qt. Bottle	17511
SAE 5W-30	3 x 5 Qt. Case	11749
	5 Qt. Bottle	11748
	6 x 1 Qt. Case	11745
	1 Qt. Bottle	11744
SAE 10W-30	3 x 5 Qt. Case	11751
	5 Qt. Bottle	11750
	6 x 1 Qt. Case	11747
	1 Qt. Bottle	11746

MOTOR OIL

HPS – HIGH PERFORMANCE STREET OIL

SAE 5W-20	55 Gal. Drum	37520
	6 x 1 Qt. Case	36520
	1 Qt. Bottle	31520
SAE 5W-30	55 Gal. Drum	37530
	5 Gal. Pail	35530
	6 x 1 Qt. Case	36530
	1 Qt. Bottle	31530
SAE 10W-30	5 Gal. Pail	35130
	6 x 1 Qt. Case	36130
	1 Qt. Bottle	31130
SAE 10W-40	55 Gal. Drum	37140
	5 Gal. Pail	35140
	6 x 1 Qt. Case	36140
	1 Qt. Bottle	31140
SAE 20W-50	55 Gal. Drum	37250
	6 x 1 Qt. Case	36250
	1 Qt. Bottle	31250

RACING OIL

XPR – EXTREME PERFORMANCE RACING

SAE 0W-8	6 x 1 Qt. Case	06009
	1 Qt. Bottle	01009
SAE 0W-20	6 x 1 Qt. Case	06008
	1-Qt. Bottle	01008
SAE 0W-30	6 x 1 Qt. Case	06010
	1 Qt. Bottle	01010
SAE 5W-20	6 x 1 Qt. Case	06011
	1 Qt. Bottle	01011
SAE 5W-30	5 Gal. Pail	05021
	6 x 1 Qt. Case	06021
	1 Qt. Bottle	01021
SAE 5W-40	6 x 1 Qt. Case	01042
	1 Qt. Bottle	01042
SAE 10W-40	55 Gal. Drum	55041
	5 Gal. Pail	05041
	6 x 1 Qt. Case	06041
	1 Qt. Bottle	01041
SAE 5W-50	6 x 1 Qt. Case	01052
	1 Qt. Bottle	01052
SAE 20W-50	5 Gal. Pail	05051
	6 x 1 Qt. Case	06051
	1 Qt. Bottle	01051
SAE 10W-60	6 x 1 Qt. Case	06061
	1 Qt. Bottle	01061

2-CYCLE OIL

HP 2-C	3 x 1 Gal. Case	43311
	1 Gal. Bottle	04311
	6 x 1 Qt. Case	06311
	1 Qt. Bottle	01311
Snow 2-C	3 x 1 Gal. Case	43511
	1 Gal. Bottle	04511

MOTORCYCLE OIL

MAX-CYCLE

SAE 10W-40	6 x 1 Qt. Case	06315
	1 Qt. Bottle	01315
SAE 20W-50	6 x 1 Qt. Case	06316
	1 Qt. Bottle	01316

DIESEL MOTOR OIL

DURALEC SUPER DIESEL MOTOR OIL

SAE 5W-40	55 Gal. Drum	87540
	6 Gal. BIB	86540
	3 x 1 Gal. Case	80540
	1 Gal. Bottle	83540
SAE 10W-30	55 Gal. Drum	87130
	5 Gal. Pail	85130
	3 x 1 Gal. Case	80130
	1 Gal. Bottle	83130
SAE 15W-40	55 Gal. Drum	55154
	6 Gal. BIB	60154
	5 Gal. Pail	05154
	3 x 1 Gal. Case	43154
	1 Gal. Bottle	04154
	6 x 1 Qt. Case	06154
	1 Qt. Bottle	01154

DURALEC ULTRA DIESEL MOTOR OIL

SAE 10W-30	55 Gal. Drum	87456
	5 Gal. Pail	85456
	3 x 1 Gal. Case	80456
	1 Gal. Bottle	83456
SAE 15W-40	55 Gal. Drum	87561
	5 Gal. Pail	85561
	3 x 1 Gal. Case	80561
	1 Gal. Bottle	83561

GEAR OILS

MAX GEAR

SAE 75W-90	5 Gal. Pail	05300
	6 x 1 Qt. Case	06300
	1 Qt. Bottle	01300
SAE 75W-140	55 Gal. Drum	55301
	5 Gal. Pail	05301
	6 x 1 Qt. Case	06301
	1 Qt. Bottle	01301
SAE 80W-90	5 Gal. Pail	05302
SAE 85W-140	6 x 1 Qt. Case	06303
	1 Qt. Bottle	01303

TRANSMISSION FLUID

AUTOMATIC

Max ATF	6 Gal. BIB	61320
	5 Gal. Pail	05320
	6 x 1 Qt. Case	06320
	1 Qt. Bottle	01320

MANUAL

Synchromax	6 x 1 Qt. Case	06512
	1 Qt. Bottle	01512

SPECIALTY LUBRICANTS

FUEL SYSTEM CLEANER AND STABILIZER

Max-Clean	6 x 20 Oz. Case	11723
	20 Oz. Bottle	11722

FUEL INJECTOR CLEANER

Max-Atomizer	12 x 6 Oz. Case	18000
	6 Oz. Bottle	18000

HIGH MILEAGE FUEL SYSTEM TREATMENT

Max-Restore	6 x 6 Oz. Case	18001
	6 Oz. Bottle	18001

OCTANE BOOST & STABILIZER

Max-Boost	6 x 16 Oz. Case	06757
	16 Oz. Bottle	11757

SPECIALTY LUBRICANTS

DIESEL CETANE BOOSTER

Max-Tane	6 x 20 Oz. Case	06755
	20 Oz. Bottle	11755

POWER STEERING FLUID

Max EZ	12 x 12 Oz. Case	12326
	12 Oz. Bottle	01326

RADIATOR COOLANT ADDITIVE

Purple Ice	12 x 12 Oz. Case	12600
	12 Oz. Bottle	01600

PENETRATING FLUID

MaxFilm	12 x 11 Oz. Case	15000
	11 Oz. Can	05000

CHAIN LUBRICANT

Max-Chain	12 x 11 Oz. Case	12330
	11 Oz. Can	05330

ENGINE BREAK-IN OIL

SAE 10W-30	6 x 1 Qt. Case	06487
	1 Qt. Bottle	11487

MULTI-PURPOSE GREASE

Ultra Performance Grease	30 x 14.1 Oz. Case	10069
	14.1 Oz. Tube	01312

MOTOR OILS

HIGH PERFORMANCE

SAE 0W-20	3 x 5 Qt. Case	23020
	5 Qt. Bottle	20020
	6 x 1 Qt. Case	26020
	1 Qt. Bottle	21020
SAE 5W-20	3 x 5 Qt. Case	23520
	5 Qt. Bottle	20520
	6 x 1 Qt. Case	26520
	1 Qt. Bottle	21520
SAE 5W-30	3 x 5 Qt. Case	23530
	5 Qt. Bottle	20530
	6 x 1 Qt. Case	26530
	1 Qt. Bottle	21530

DURALEC SUPER DIESEL MOTOR OIL

SAE 15W-40	3 x 5 Qt. Case	23154
	5 Qt. Bottle	20154

MOTORCYCLE OIL

MAX-CYCLE

SAE 10W-40	6 x 1 Qt. Case	26315
	1 Qt. Bottle	21315
SAE 20W-50	6 x 1 Qt. Case	26316
	1 Qt. Bottle	21316

TRANSMISSION FLUID

AUTOMATIC

Max ATF	6 x 1 Qt. Case	26320
	1 Qt. Bottle	21320

TRANSMISSION FLUID

MANUAL

Synchromax	6 x 1 Qt. Case	26512
	1 Qt. Bottle	21512

GEAR OIL

MAX GEAR

SAE 75W-90	6 x 1 Qt. Case	26300
	1 Qt. Bottle	21300
SAE 75W-140	6 x 1 Qt. Case	26301
	1 Qt. Bottle	21301

SPECIALTY LUBRICANTS

FUEL SYSTEM CLEANER AND STABILIZER

Max-Clean	6 x 20 Oz. Case	26722
	20 Oz. Bottle	21722

FUEL INJECTOR CLEANER

Max-Atomizer	12 x 6 Oz. Case	—
	6 Oz. Bottle	26000

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