



*THE PERFORMANCE OIL THAT OUTPERFORMS®*

*CONSUMER PRODUCT CATALOG*

**2014**

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## ROYAL PURPLE'S UNIQUE PERFORMANCE ADVANTAGES

Royal Purple manufactures high performance products for most automotive, motorcycle, marine and racing applications. Numerous independent tests and user testimonials report meaningful performance improvements by using Royal Purple products. Find out more at [www.royalpurple.com](http://www.royalpurple.com).

### ADVANCED TECHNOLOGY CREATES ADVANCED PRODUCTS

Royal Purple's advanced additive technologies, such as Synerlec, enable its products to outperform ordinary synthetic and conventional lubricants. These unique chemistries strengthen the base oil for improved performance. They also create an ionic bond that adheres to metal parts for continuous protection.

### HIGH FILM STRENGTH IMPROVES PERFORMANCE

The film strength of a lubricant is its inherent ability to withstand the effects of load, speed and temperature without breaking down or rupturing, thus enabling the lubricant to maintain an unbroken film between lubricated surfaces under operating conditions. The high film strength of Royal Purple's Synerlec-enhanced lubricants dramatically reduces wear and heat, improves combustion for more power, optimizes fuel economy and reduces emissions.

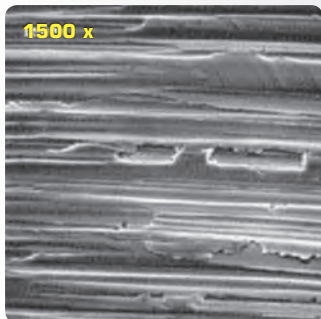
*"We've torn down some of our dyno engines that have been seriously abused, but with Royal P(urple) in the pan, the bearings have looked new."*

—*Hot Rod Magazine*

Royal Purple's Synerlec-enhanced lubricants respond to increased pressure with increased oil film strength, where other lubricants have been displaced. The result is less damaging metal-to-metal contact and wear. Take a look at the following photos:

WHY USE ROYAL PURPLE

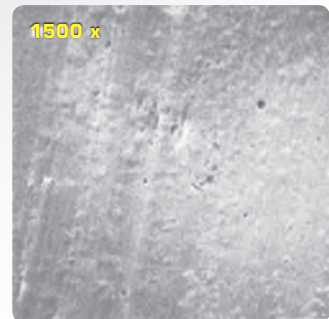
## BEARING COMPARISON



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.

Visit [RoyalPurple.com](http://RoyalPurple.com) for more information and to find a dealer near you.



## ROYAL PURPLE® API-LICENSED MOTOR OIL

Royal Purple meets both dexos1™\* and ILSAC GF-5 specifications in critical lubrication performance:

**BETTER WEAR PROTECTION** – Enhanced additive technology prevents metal-to-metal contact beyond both dexos1™\* and ILSAC GF-5 specs

**INCREASED FUEL EFFICIENCY** – A low coefficient of friction results in optimized fuel efficiency (the fuel economy of our 5W-30 meets the fuel economy requirements of a 5W-20 oil)

**BETTER PROTECTION OF THE EXPENSIVE CATALYTIC EMISSION SYSTEM** – Patented anti-wear additive chemistry minimizes the harmful effects exhaust gases pose to the catalyst

**IMPROVED COMPATIBILITY WITH FUELS CONTAINING ETHANOL** – Patented additive technology prevents the white sludge and lubrication starvation that can occur with 20% or higher ethanol fuel

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

\*dexos1™ is a registered trademark of the General Motors Corporation.



**MULTI-GRADE OILS: 0W-20, 0W-40, 5W-20, 5W-30, 5W-40, 10W-30, 10W-40, 15W-40, 20W-50**

### MULTI-GRADE OILS — TYPICAL PROPERTIES\*

SAE GRADE / API SERVICE	0W-20 <sup>1</sup>	0W-40 <sup>4</sup>	5W-20 <sup>1,7</sup>	5W-30 <sup>1,5</sup>	5W-40 <sup>4</sup>	10W-30 <sup>1,6</sup>	10W-40	15W-40 <sup>2,3</sup>	20W-50
ASTM TESTS	SN	SM	SN	SN	SM	SN	SN	CJ-4/SN	SN
D-445 Viscosity									
cSt @ 40°C	42.58	79.9	48.58	60.62	93.7	65.27	83.67	105	181.4
cSt @ 100°C	8.37	14.3	8.5	10.42	15.7	10.75	13.36	14.8	20.23
D-2270 Viscosity Index	177	182	153	162	179	155	162	146	130
D-4683 HTHS	2.58	3.58	2.66	3.07	3.91	3.18	3.67	4.22	5.00
D-4684 Pumping Viscosities									
cP @ -40°C	34,200	20,000	—	—	—	—	—	—	—
cP @ -35°C	—	—	18,400	25,200	13,040	—	—	—	—
cP @ -30°C	—	—	—	—	—	12,000	15,000	—	—
cP @ -25°C	—	—	—	—	—	—	—	15,000	—
cP @ -20°C	—	—	—	—	—	—	—	—	27,700
D-92 Flash Point °F	420	465	435	420	425	425	425	430	425

\* Properties are typical and may vary.

1 API SN Resource Conserving and ILSAC GF-5.

2 For use in both gasoline and diesel engines.

3 15W-40 meets Cummins CES 20081, DDC Powerguard 93K218, Mack E0-0 Premium Plus, Renault VI RLD-3 and Volvo VDS-4 engine oil requirements.

4 0W-40 and 5W-40 meets and/or exceeds European specs ACEA A3/B3-04 warranty requirements and is recommended for passenger car gasoline and light duty diesel engines.

5 5W-30 meets Chrysler MS-6395T, Ford WSS-M2C946-A and GM 6094M specifications and dexos1™\* warranty requirements for gasoline engines.

6 10W-30 meets Chrysler MS-6395T and GM6094M specification for gasoline engines.

7 5W-20 meets Chrysler MS-6395T, Ford WSS-M2C945-A and GM6094M specifications and dexos1™\* 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](http://www.royalpurple.com).

**STANDARD PACKAGING:**  
1-Quart Bottles  
5-Gallon Pails

Part numbers listed on  
pages 48 — 50.

**STRAIGHT-GRADE OILS — TYPICAL PROPERTIES\***

		SAE GRADE / API SERVICE		
		30	40	50
ASTM TEST		SJ	SJ	SJ
D-445	Viscosity			
	cSt @ 40°C	79.0	121.0	182.0
	cSt @ 100°C	10.6	14.2	18.6
	SUS @100°F	408	631	955
	SUS @ 210°F	63	74	92
D-2270	Viscosity Index	119	113	113
D-92	Flash Point °F	445	455	435

\* PROPERTIES ARE TYPICAL AND MAY VARY.  
STRAIGHT-GRADE OILS: SAE 30, SAE 40, SAE 50



MOTOR OILS

**PART NUMBERS****STRAIGHT-GRADE**

SAE 30	5-Gal. Pail	05030
	6-Qt. Case	06030
	1-Qt. Bottle*	01030
SAE 40	6-Qt. Case	06040
	1-Qt. Bottle*	01040
SAE 50	5-Gal. Pail	05050
	6-Qt. Case	06050
	1-Qt. Bottle*	01050

**MULTI-GRADE**

0W-20	5-Gal. Pail	05020
	5-Qt. Case	54020
	5-Qt. Bottle*	51020
	6-Qt. Case	06020
	1-Qt. Bottle*	01020
0W-40	6-Qt. Case	06484
	1-Qt. Bottle*	11484

5W-20	5-Gal. Pail	05520
	5-Qt. Case	54520
	5-Qt. Bottle*	51520
	6-Qt. Case	06520
	1-Qt. Bottle*	01520
5W-30	5-Gal. Pail	05530
	5-Qt. Case	54530
	5-Qt. Bottle*	51530
	6-Qt. Case	06530
	1-Qt. Bottle*	01530
5W-40	5-Gal. Pail	05540
	6-Qt. Case	06540
	1-Qt. Bottle*	01540
10W-30	5-Gal. Pail	05130
	5-Qt. Case	54130
	5-Qt. Bottle*	51130
	6-Qt. Case	06130
	1-Qt. Bottle*	01130

10W-40	5-Gal. Pail	05140
	6-Qt. Case	06140
	1-Qt. Bottle*	01140
15W-40	5-Gal. Pail	05154
	4-Gal. Case	44154
	1-Gal. Bottle*	04154
	6-Qt. Case	06154
20W-50	1-Qt. Bottle*	01154
	5-Gal. Pail	05250
	6-Qt. Case	06250
	1-Qt. Bottle*	01250

\*AVAILABLE IN CASES ONLY

Royal Purple recommends waiting until the manufacturer's first scheduled oil change or a minimum of 2,000 miles in new gasoline engines before using Royal Purple. Allow a minimum of 6,000 miles before use in diesel engines.

**TECH TIP**

## HPS® – HIGH PERFORMANCE STREET MOTOR OIL

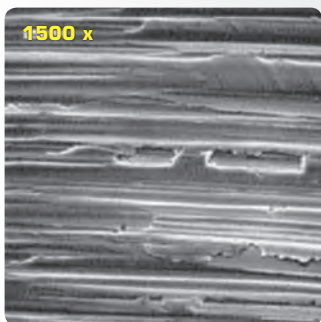
Royal Purple HPS Series motor oil is specifically formulated to maximize performance and meet the demands of high performance and modified engines. HPS is recommended for vehicles no longer under manufacturer warranty and for those seeking a higher level of performance and protection.

Royal Purple HPS is fortified with a high level of zinc / phosphorus anti-wear additive and Royal Purple's proprietary Synerlec® additive technology. This unique blend enables HPS to outperform leading synthetics and conventional lubricants for both gasoline and diesel engines.

### PERFORMANCE ADVANTAGES

- Exceptionally high film strength for dramatic reductions in engine wear and reduced engine heat to extend the life of your engine
- Improved sealing between the piston ring and cylinder wall maximizes horsepower and torque and optimizes fuel economy
- Exceptional oxidation stability extends oil life and allows for more miles driven between oil changes saving you time, money and reducing the impact on the environment
- Advanced synthetic solvency reduces engine deposits and keeps engines clean
- Protects valve trains using roller or flat tappet lifters that require added protection due to high lift / high ramp rate camshafts
- Provides superior corrosion protection

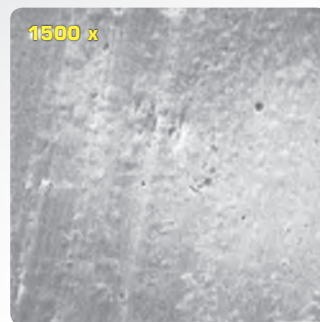
## BEARING COMPARISON



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.





**AVAILABLE VISCOSITIES: 5W-20, 5W-30, 10W-30, 10W-40 AND 20W-50.**

- 5W-30, 10W-30, 10W-40, and 20W-50 are formulated for gasoline and diesel engine use.
- HPS 5W-20 is for gasoline engine use only.

**PART NUMBERS**

<b>5W-20</b>		
5-Gal. Pail		35520
6-Qt. Case		36520
1-Qt. Bottle*		31520
<b>5W-30</b>		
5-Gal. Pail		35530
6-Qt. Case		36530
1-Qt. Bottle*		31530
<b>10W-30</b>		
5-Gal. Pail		35130
6-Qt. Case		36130
1-Qt. Bottle*		31130
<b>10W-40</b>		
5-Gal. Pail		35140
6-Qt. Case		36140
1-Qt. Bottle*		31140
<b>20W-50</b>		
5-Gal. Pail		35250
6-Qt. Case		36250
1-Qt. Bottle*		31250

\*AVAILABLE IN CASES ONLY

**MOTOR OILS**

## HMX<sup>®</sup> – HIGH MILEAGE MOTOR OIL

Royal Purple HMX is specifically formulated with robust zinc / phosphorus anti-wear additives and Royal Purple's proprietary additive technology Synerlec 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.

Royal Purple's advanced Synerlec technology provides an exceptional film strength by reducing friction for peak engine performance. HMX also provides outstanding oxidation resistance to safely extend oil drains, and an ionic attraction to metal components maintaining a film of oil on parts minimizing start-up wear.

### PERFORMANCE ADVANTAGES

- Minimizes wear and restores lost engine performance
- Fortified with zinc/phosphorus anti-wear additive
- Extended drain intervals
- Exceptional oxidation stability
- Reduces engine deposits
- Superior corrosion protection

### PART NUMBERS

#### 5W-30

5-Qt. Case	11749
5-Qt. Bottle*	11748
6-Qt. Case	11745
1-Qt. Bottle*	11744

#### 10W-30

5-Qt. Case	11751
5-Qt. Bottle*	11750
6-Qt. Case	11747
1-Qt. Bottle*	11746

\*AVAILABLE IN CASES ONLY



### MULTI-GRADE OILS: 5W-30, 10W-30

**PLEASE NOTE:** Royal Purple meets API Service SL warranty requirements for gasoline engines. API recommends SL oils for 2004 or older automobiles. Royal Purple recommends this product for any four-cycle gasoline engine with 75,000 miles (120,000 km) or more.

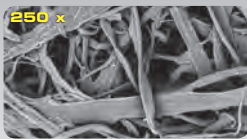


## ROYAL PURPLE® EXTENDED LIFE OIL FILTERS

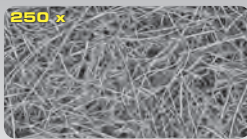
Royal Purple oil filters provide superior particle removal, high-performance and optimized flow characteristics for maximum performance and longer filter life.

### EACH FILTER FEATURES

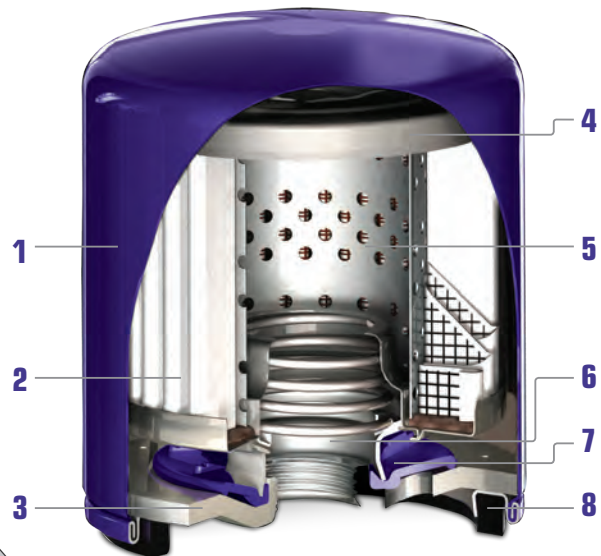
- 100% synthetic micro-glass media that catches 99% of particles 25 microns and larger, and 80% of particles 10 microns and larger
- High-performance silicone anti-drain back valve that prevents dry starts, even in extreme conditions
- Extra heavy-duty rubber base gasket that ensures a leak-free seal
- An ultra-strength filter housing endures higher burst strength than conventional filters



Magnification of 250x, photo shows conventional cellulose filtration fibers. The spaces allow larger particles to pass through to your engine.



Royal Purple's state-of-the-art synthetic filtration media provides greater filtration efficiency and particulate capacity while minimizing flow restriction.



OIL FILTER

#### AVERAGE BETA RATING BASED ON ISO 4548-12 MULTI-PASS TEST METHODS:

B100 = 25 (which means at 25 or greater micron; media is 99% efficient.)

B75 = 20 (which means at 20 or greater micron; media is 98.7% efficient)

Also considered absolute rating.)

B5 = 10 (which means at 10 micron or greater; media is 80% efficient.)

### 1 SHELL

A thick, heavy exterior shell provides extra security against puncture from road debris.

### 2 FILTER ELEMENT

100% screen-backed synthetic media provides superior filtration while keeping flow restriction low.

### 3 STEEL BACKPLATE

Heavy gauge steel provides up to twice the burst strength of ordinary filters.

### 4 METAL END-CAPS

Provides positive seal for filter element assembly.

### 5 METAL CENTER TUBE

Metal construction prevents filter element collapse.

### 6 BYPASS VALVE

Ensures oil flow in situations of excessive filter element flow restriction.

### 7 SILICONE ANTI-DRAINBACK VALVE

Prevents dry starts by eliminating oil drain back during shutdown. Silicone outperforms and outlasts standard nitrile rubber in both extreme cold and hot oil temperatures.

### 8 GASKET

Premium nitrile rubber and special lubricity compounds reduce torque during installation and removal.

**FIND THE FILTER THAT IS  
RIGHT FOR YOUR VEHICLE.**



Filter cross reference  
chart on page 51.

For vehicles under warranty follow the manufacturer's recommended filter change intervals. Royal Purple filters are rated for up to 12,000 miles or 12 months when used with Royal Purple synthetic engine oils and are fully compatible with all synthetic and conventional oils.

TECH TIP

## MAX-CYCLE<sup>®</sup>

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's proprietary Synerlec<sup>®</sup> 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.

Max-Cycle meets or exceeds API requirements and is rated JASO MA2, the highest wet clutch compatibility rating under the JASO T903:2011 Clutch Friction Test. Max-Cycle is compatible with other mineral and synthetic motor oils. No flushing is necessary prior to use.

### PERFORMANCE ADVANTAGES

- Greater wear protection
- Cleaner, more efficient engines
- Superior rust / corrosion protection
- Cooler operation and less parasitic power loss

### PART NUMBERS

10W-30		
6-Qt. Case		06314
1-Qt. Bottle*		01314
10W-40		
6-Qt. Case		06315
1-Qt. Bottle*		01315
20W-50		
6-Qt. Case		06316
1-Qt. Bottle*		01316

\*AVAILABLE IN CASES ONLY



### MULTI-GRADE OILS: 10W-30, 10W-40, 20W-50

### TYPICAL PROPERTIES\*

		SAE GRADE / API SERVICE		
ASTM TESTS		10W-30	10W-40	20W-50
D-445	Viscosity			
	cSt @ 40°C	74	92	165
	cSt @ 100°C	11.5	14	20
D-2270	Viscosity Index	145	155	141
	TBN	9.2 min.	9.2 min.	9.2 min.

\* PROPERTIES ARE TYPICAL AND MAY VARY.

STANDARD PACKAGING:  
 1-Quart Bottles

Part numbers listed  
 on pages 48 – 50.

**REDUCES WEAR AND TEAR**

Max-Cycle's high film strength dramatically reduces wear. Take a look at the pictures of cam chain tensioners below. Each tensioner came from an American V-Twin engine with 10,000 miles of use.

Compare the images below. The difference in wear is dramatic:



A cam tensioner from an engine that used the manufacturer's conventional oil.



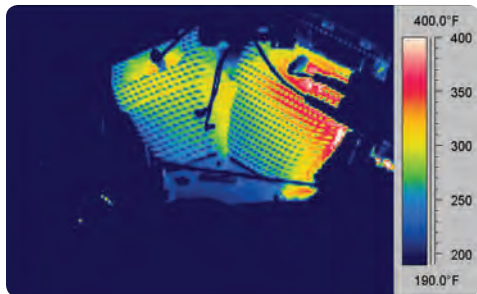
A cam tensioner from an engine that used the manufacturer's synthetic oil.



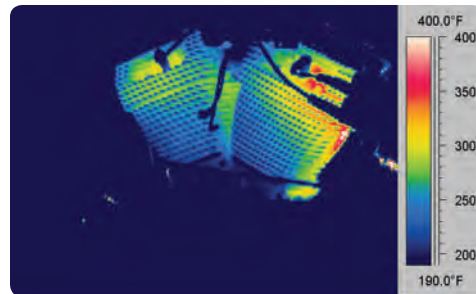
A cam tensioner from an engine that used Royal Purple after an initial break-in period of 1,500 miles.

**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 oil



Thermal imaging results after switching to Max-Cycle®

**"Royal Purple is proud to be the factory fill for renowned super bike manufacturers."**





## ROYAL PURPLE® EXTREME PERFORMANCE RACING OILS

Royal Purple XPR (Extreme Performance Racing) oils are recommended for use in various racing applications, and are popular in a variety of motorsports including: NASCAR, NHRA, World of Outlaws and Bonneville Salt Flats.

Royal Purple XPR oils provide more protection than other racing oils - mineral or synthetic - including those combined with aftermarket additives. Professional engine builders and race teams cite increased horsepower and longer engine life with the use of Royal Purple, which gains its performance advantages from Royal Purple's proprietary Synerlec® additive technology. XPR oils are recommended for engines running exotic fuels.

Please consult Royal Purple's Technical Department at [rpautotech@royalpurple.com](mailto:rpautotech@royalpurple.com) when choosing the racing oil for your specific application.

### RACING OILS

- **XPR 3.1**  
XPR 3.1 0W-5 is the lowest viscosity racing motor oil designed for the most competitive classes such as Pro Stock, Pro Stock Bike, Comp Eliminator and NASCAR Cup (qualifying). The ultra low viscosity provides the most horsepower possible by keeping parasitic losses to an absolute minimum while providing unparalleled protection.
- **XPR 0W-10**  
XPR 0W-10 is an ultra-light viscosity racing motor oil formulated for use in drag racing, motorcycle sprint racing, etc.
- **XPR 5W-20**  
XPR 5W-20 is a light viscosity racing motor oil that is excellent for drag racing.



- **XPR 5W-30**  
XPR 5W-30 works well in a variety of applications from oval track late models to bracket racing. It is extremely versatile and produces excellent horsepower while preventing wear.
- **XPR 10W-40**  
XPR 10W-40 is designed for marine, oval track and endurance car racing. Capable of withstanding long intervals of extreme heat, it is extremely popular in sprint cars, late models and World of Outlaws racing.
- **XPR 20W-50**  
XPR 20W-50 is formulated for running extended periods under extreme pressure and heat. It is used in oval track, marine and drag racing and is very popular in sprint cars, late models, truck pullers and bracket racing.

STANDARD PACKAGING:  
1-Quart Bottles  
5-Gallon Pails

Part numbers listed on  
pages 48 – 50.

**XPR 3.1 0W-5, XPR 0W-10, 5W-20, 5W-30, 10W-40 AND 20W-50****PERFORMANCE ADVANTAGES**

- Greater wear protection on startup
- Clean, efficient equipment
- Extends equipment life
- Compatible with conventional mineral and synthetic oils
- Non-foaming
- Outstanding rust / corrosion protection
- High temperature service capability
- XPR works extremely well with exotic fuels, such as alcohol, methanol and nitrous oxide (N<sub>2</sub>O)

**PART NUMBERS**

XPR 3.1 0W-5	
5-Gal. Pail	05205
XPR 0W-10	
5-Gal. Pail	05009
6-Qt. Case	06009
1-Qt. Bottle*	01009
XPR 5W-20	
5-Gal. Pail	05011
6-Qt. Case	06011
1-Qt. Bottle*	01011
XPR 5W-30	
5-Gal. Pail	05021
6-Qt. Case	06021
1-Qt. Bottle*	01021
XPR 10W-40	
5-Gal. Pail	05041
6-Qt. Case	06041
1-Qt. Bottle*	01041
XPR 20W-50	
5-Gal. Pail	05051
6-Qt. Case	06051
1-Qt. Bottle*	01051

\*AVAILABLE IN CASES ONLY

**RACING OILS**

Royal Purple does not provide physical specifications on its racing products. Please consult Royal Purple's automotive technical support department at 281-354-8600 or 888-382-6300 to determine which racing oil is right for you.

**TECH TIP**

## NITRO PLUS RACING OILS

Royal Purple Nitro Plus oils are straight-grade synthetic racing motor oils formulated specifically for use in blown alcohol, nitro-methane or any racing applications that experience excessive fuel dilution.

- **Nitro Plus 50**  
Viscosity typical of a SAE 50 oil.
- **Nitro Plus 60**  
Viscosity typical of a SAE 60 oil.
- **Nitro Plus 70**  
Viscosity typical of a SAE 70 oil.

### EXCLUSIVE PERFORMANCE ADVANTAGES

- Greater wear protection
- Separates rapidly from alcohol/nitro methane
- Resists bearing washout
- Can withstand severe stress of high compression engines
- Non-Foaming
- Outstanding Rust/Corrosion Protection
- High Temperature Service Capability

### NITRO PLUS OILS: 50, 60, 70



### PART NUMBERS

Nitro Plus 50	
5-Gal. Pail	05950
Nitro Plus 60	
5-Gal. Pail	05960
Nitro Plus 70	
5-Gal. Pail	05970

STANDARD PACKAGING:  
5-Gallon Pails

Part numbers listed  
on pages 48 – 50.



## BREAK-IN OIL

Engine builders have grown increasingly concerned that many modern motor oils do not provide adequate wear protection for new engines, particularly those using flat-tappet cams. Royal Purple has addressed this issue by developing a engine break-in oil.

Royal Purple Break-in Oil is formulated to allow optimal ring seal and protect rotating assembly components, such as the camshaft and valve train, from initial start up wear. Royal Purple combines highly refined mineral oil, preferred for engine break-in, with advanced additives containing high levels of zinc and phosphorus to optimize protection in flat-tappet and roller engines.

Royal Purple Break-in Oil is a fully formulated conventional 10W-30 engine oil and does not require the use of any other chemical additives. Royal Purple recommends using their high performance synthetic motor oils after engine break-in for maximum engine performance and protection.

### TYPICAL PROPERTIES\*

ASTM TESTS		
D-445	Viscosity	
	cSt @ 40°C	76
	cSt @ 100°C	12
	SUS @ 100°F	400
	SUS @ 210°F	65
D-2270	Viscosity Index	155
D-4684	Pumping Viscosity	
	cP @ -30°F	18,200
D-92	Flash Point °F	400

\* PROPERTIES ARE TYPICAL AND MAY VARY.



ENGINE BREAK-IN OIL

### PART NUMBERS

12-Qt. Case	11497
1-Qt. Bottle*	11487

\*AVAILABLE IN CASES ONLY

## SNOW 2-C

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's proprietary, synthetic Synerlec<sup>®</sup> 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.

### PERFORMANCE ADVANTAGES

- Greater wear protection
- Superior corrosion protection
- Saves fuel
- Reduces exhaust emissions
- Ashless
- Increases performance
- Keeps engines clean

### PART NUMBERS

5-Gal. Pail	05511
4-Gal. Case	44511
1-Gal. Bottle*	04511

\*AVAILABLE IN CASES ONLY



### TYPICAL PROPERTIES\*

ASTM TESTS		
D-445	Viscosity	
	cSt @ 40°C	46
	cSt @ 100°C	8.4
	SUS @ 100°F	231
	SUS @ 210°F	54
D-5293	Cranking Viscosity	
	cP @ -30°F	5,300
D2270	Viscosity Index	162
D-92	Flash Point °F	270
	Pour Point °C	-51
	Total Base Number	10.0 min
D-4502	Density	
	Specific Gravity @ 60 °F	0.863
	Pounds / Gallon	7.2

\* PROPERTIES ARE TYPICAL AND MAY VARY.

## HP 2-C® – HIGH PERFORMANCE 2-CYCLE MOTOR OIL

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, Royal Purple recommends its Snow 2-C.

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.

The ashless formulation and synthetic solvency of HP 2-C keeps spark plugs and exhaust ports clean for maximum engine efficiency. 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.

### PERFORMANCE ADVANTAGES

- Greater wear protection
- Cleaner, more efficient engines
- Superior rust / corrosion protection
- Cooler operation and less parasitic power loss
- Ashless to minimize exhaust deposits

### PART NUMBERS

5-Gal. Pail	05311
4-Gal. Case	44311
1-Gal. Bottle*	04311
12-Qt. Case	12311
1-Qt. Bottle*	01311

\*AVAILABLE IN CASES ONLY



2-CYCLE OIL

### TYPICAL PROPERTIES\*

ASTM TESTS		
D-445	Viscosity	
	cSt @ 40°C	46
	cSt @ 100°C	7.5
	SUS @ 100°F	240
	SUS @ 210°F	51
D-2270	Viscosity Index	129
D-92	Flash Point °F	240
	Pour Point °C	-45
D-130	Corrosion Test	
	3 hrs. @ 210°F	1a
	24 hrs. @ 210°F	1a
D-665	Rust Test	
	Fresh Water	Pass
	Salt Water	Pass

\* PROPERTIES ARE TYPICAL AND MAY VARY.

Part numbers listed  
on pages 48 – 50.

**STANDARD PACKAGING:**  
1-Quart Bottles  
1-Gallon Bottle  
5-Gallon Pails



## HPM<sup>®</sup> – HIGH PERFORMANCE MARINE OIL

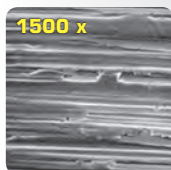
Royal Purple High Performance Marine Oil (HPM) is specifically formulated to maximize performance and provide superior protection for four-stroke marine engines. HPM is certified NMMA FC-W Catalyst Compatible<sup>®</sup> and exceeds the stringent warranty requirements.

HPM motor oils provide exceptional anti-wear protection with a load-carrying capacity multiple times that of ordinary mineral or synthetic marine lubricants. It delivers cooler operating temperatures, increases engine efficiency and maximizes horsepower and torque. Royal Purple's advanced, proprietary Synerlec<sup>®</sup> technology enables HPM to exceed the harsh demands of marine applications.

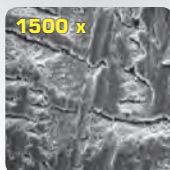
### PERFORMANCE ADVANTAGES

- Exceptionally high film strength for dramatic reductions in engine wear and heat to extend the life of your engine
- Improved sealing between the piston ring and cylinder wall for optimized fuel economy and maximum horsepower and torque
- Exceptional oxidation stability extends oil life and allows for more hours between oil changes saving you time, money and reducing the impact on the environment
- Advanced synthetic solvency reduces engine deposits and keeps engines clean.
- Superior corrosion protection

Take a look at the following photos:



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 HPM.



### AVAILABLE VISCOSITIES: 10W-30 & 10W-40.

- 10W-30 is suitable for any 4-stroke gasoline inboard or outboard engine recommending a SAE 30, 10W-30 or other multi-viscosity 30 weight marine oil.
- 10W-40 is suitable for any 4-stroke gasoline inboard or outboard engine recommending a SAE 40, 10W-40, 15W-40, 20W-40, 25W-40 or other multi-viscosity 40 weight marine oil.

### PART NUMBERS

10W-30		
12-Qt. Case		11583
1-Qt. Bottle*		11582
10W-40		
12-Qt. Case		11630
1-Qt. Bottle*		11629

\*AVAILABLE IN CASES ONLY

## MAX GEAR®

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 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's proprietary Synerlec® additive technology. Max Gear makes gears run smoother, quieter, cooler and longer without overhauls.

### PERFORMANCE ADVANTAGES

- Maximizes horsepower
- Extends gear and bearing life
- Reduces operating temperature
- Severe service performance
- Lower coefficient of friction
- Superior corrosion protection
- Separates rapidly from water
- Environmentally responsible
- For use with open, limited-slip and locking differential
- Contains limited-slip friction modifier



GEAR OILS

### TYPICAL PROPERTIES\*

ASTM TESTS		SAE GRADE				
		75W-90	75W-140	80W-90	85W-140	90
D-445	Viscosity					
	cSt @ 40°C	100	187	160	313	176
	cSt @ 100°C	16.5	27.5	17.4	28.5	17.5
D-2983	Brookfield Viscosity					
	cP @ -12°C	—	—	—	22,000	—
	cP @ -26°C	—	—	57,000	—	—
	cP @ -40°C	65,000	135,000	—	—	—
D-92	Flash Point °F	325	375	350	350	330
	Pour Point °C	-51	-54	-39	-39	-36

\*PROPERTIES ARE TYPICAL AND MAY VARY.

### PART NUMBERS

75W-90	15-Gal. Keg	16300	80W-90	5-Gal. Pail	05302
	5-Gal. Pail	05300		15-Gal. Keg	16303
	12-Qt. Case	12300		5-Gal. Pail	05303
	1-Qt. Bottle*	01300		12-Qt. Case	12303
75W-140	15-Gal. Keg	16301	SAE 90	1-Qt. Bottle*	01303
	5-Gal. Pail	05301		5-Gal. Pail	05304
	12-Qt. Case	12301			
	1-Qt. Bottle*	01301			

\*AVAILABLE IN CASES ONLY

**STANDARD PACKAGING:**  
1-Quart Bottles  
5-Gallon Pails

All viscosities of Max Gear are formulated with the friction modifiers necessary for use in clutch or cone type limited-slip differentials. No additional additives are necessary.

**TECH TIP**

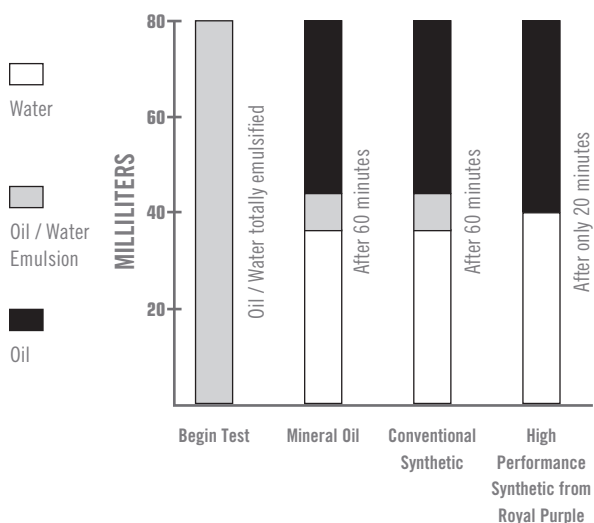
## HPM – HIGH PERFORMANCE MARINE GEAR LUBE

Royal Purple HPM Gear Lube is formulated to maximize performance and provide Synthetic Defense™ for marine lower gear units and outdrives. Its cushioning molecules absorb gear impact to dramatically minimize wear. HPM Gear Lube also significantly reduces friction, which lowers gear unit temperatures, extends equipment life and improves fuel efficiency.

HPM Gear Lube uses Royal Purple's advanced, proprietary Synerlec® additive technology for maximum water separation and protection from corrosion. It is recommended for equipment requiring an API Service GL-5 or GL-4 fluid.

### PERFORMANCE ADVANTAGES

- Reduces wear and heat to extend the life of your lower unit
- Provides maximum water separation and prevents corrosion
- Improves fuel efficiency



### PART NUMBERS

80W-90	
5-Gal. Pail	11689
12-Qt. Case	11688
1-Qt. Bottle*	11687

\*AVAILABLE IN CASES ONLY



## SYNCHROMAX®

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's 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.

### PERFORMANCE ADVANTAGES

- Greater wear protection
- Smoother shifts
- Excellent rust / corrosion protection
- Reduces friction for more power
- Lowers operating temperatures

### PART NUMBERS

5-Gal. Pail	05512
12-Qt. Case	12512
1-Qt. Bottle*	01512

\*AVAILABLE IN CASES ONLY



### TYPICAL PROPERTIES\*

#### ASTM TESTS

D-445	Viscosity	
	cSt @ 40°C	39
	cSt @ 100°C	7.5
	SUS @ 100°F	200
	SUS @ 210°F	51
D-2983	Brookfield Viscosity	
	cP @ -20°C (-4°F)	1,330
	cP @ -30°C (-22°F)	3,100
	cP @ -40°C (-40°F)	9,178
D-2270	Viscosity Index	162
D-92	Flash Point °F	405
	Pour Point °C	-51
D-4052	Density	
	Specific Gravity @ 60 °F	0.847
	Pounds / Gallon	7.06

\*PROPERTIES ARE TYPICAL AND MAY VARY.

MANUAL TRANSMISSION FLUID

**STANDARD PACKAGING:**  
1-Quart Bottles  
5-Gallon Pails

View Royal Purple's transmission lubricant cross reference chart on pages 44 – 47 to determine which lubricant is best for your application.

**TECH TIP**

### MAX ATF<sup>®</sup>

Royal Purple Max ATF is a synthetic, high performance, automatic transmission fluid. Its high film strength helps to dramatically reduce heat and wear.

Automatic transmissions generate a great deal of heat and depend on the transmission fluid for cooling and protection. More than 90 percent 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 is fully compatible and can be mixed with other automatic transmission fluids; however, for the best results drain or flush the current oil and then fill with Max ATF.

Max ATF is recommended in vehicles requiring any of these automatic transmission fluids:

Allison C-4, TES-295  
Audi G-052-162, G-052-990, G-055-025  
BMW 7045E, LA2634, LT71141  
Chrysler ATF+, ATF+2, ATF+3, ATF+4  
Chrysler Mopar AS68RC  
Ford FNR5, MERCON<sup>®</sup>, MERCON<sup>®</sup> V  
GM DEXRON<sup>®</sup>, DEXRON<sup>®</sup> II, DEXRON<sup>®</sup> IID,  
DEXRON<sup>®</sup> IIE, DEXRON<sup>®</sup>-IIIF,  
DEXRON<sup>®</sup> IIIG, DEXRON<sup>®</sup>-IIIH  
Esso LT 71141  
Honda ATF-Z1 (except in CVT's)  
Hyundai SP-II, SP-III  
JWS 3309, JWS 3314, JWS 3317  
Kia Red-1, SP-II, SP-III  
Idemitsu K17  
JASO 1-A  
MAN 339F, 339 V1, 339 V2, 339 Z1, 339 Z2

Mazda ATF-M III, ATF-MV  
Mercedes Benz 236.1, 236.2, 236.3, 236.5,  
236.6, 236.7, 236.9, 236.10, 236.11  
Mitsubishi SP-II, SP-III  
Nissan 402, Matic-D, Matic-J, Matic-K  
Shell 3403, LA2634,  
M-1375.4 (ZF 6-Speed AT)  
Subaru ATF, ATF-HP  
Suzuki 3314, 3317  
Texaco ETL-7045E, ETL-8072B, N402  
Toyota T-III, T-IV  
Voith 55.6335.XX (G607)  
Volvo Pass Car (4-6 Speed AT), 97340  
(Construction Equipment), 97341  
VW G-052-162, G-052-990, G-055-025  
ZF TE-ML, 03D, 04D, 05L, 09, 11B, 14A,  
16L, 17C, TE-ML 14B

**PLEASE NOTE:** Max ATF is NOT recommended for the following applications: Allison TES-389, DEXRON<sup>®</sup> VI, Ford Type F and MERCON<sup>®</sup> SP & LV, Honda DW-1, Hyundai SP-IV and NWS-9638, Kia SP-IV, JWS 3324, MAN 339 Z3, Mercedes Benz 236.8, 236.12, 236.14 & 236.15, Mitsubishi SP-IV and ATF J2, Nissan Matic-S, Saab 93-165-147, Toyota WS (JWS 3324) and ZF TE-ML 14C. **Max ATF is not recommended for use in any CVT or DCT applications.**

*Dexron<sup>®</sup> is a registered trademark of General Motors Corporation.*

*Mercon<sup>®</sup> is a registered trademark of Ford Motor Company.*



### TYPICAL PROPERTIES\*

ASTM TESTS		
D-445	Viscosity	
		cSt @ 40°C
		38
		cSt @ 100°C
		7.5
D-2983		SUS @ 100°F
		192
		SUS @ 210°F
		50
		cP @ -10°C (14°F)
D-2983		cP@ -20°C (-4°F)
		1,100
		cP@ -30°C (-22°F)
D-2270		2,520
		cP@ -40°C (-40°F)
		7,950
D-92	Flash Point °F	169
D-92	Pour Point °C	395
D-4052	Density	-69
	Specific Gravity @ 60°F	0.84
	Pounds / Gallon	7.01

\*PROPERTIES ARE TYPICAL AND MAY VARY.

### PART NUMBERS

5-Gal. Pail	05320
6-Qt. Case	06320
1-Qt. Bottle*	01320

\*AVAILABLE IN CASES ONLY

**STANDARD PACKAGING:**  
1-Quart Bottles  
5-Gallon Pails

Part numbers listed  
on pages 48– 50.

## RACING ATF

Royal Purple Racing ATF is a high performance, non-friction modified automatic transmission fluid design to further reduce clutch slippage in high power, competition automatic transmissions. Racing ATF delivers firm, positive shifts for greater clutch life, consistent ETs and cooler operating temperatures. Exceptional oxidation resistance allows for extended service life as compared to conventional and other synthetic fluids. Please consult Royal Purple's automotive technical support department when choosing a transmission fluid.

Racing ATF is fortified with Royal Purple's proprietary Synerlec® technology which is shown to make equipment run cooler, smoother and longer. Its high viscosity index provides exceptional performance at a wide temperature range making it ideal for both circle track and drag racing applications. Racing ATF is recommended for all high performance applications specifying Ford Type F automatic transmission fluid, as well as other non-electronic shift, competition automatic transmissions.

Field testing in GM, Ford and Chrysler drag racing transmissions has shown Royal Purple Racing ATF to be very consistent in pass-to-pass performance and has resulted in the doubling or tripling of transmission component and fluid life.

### PART NUMBERS

5-Gal. Pail	10154
12-Qt. Case	11570
1-Qt. Bottle*	11569

\*AVAILABLE IN CASES ONLY



**PLEASE NOTE:** Racing ATF is not recommended for any stock automatic transmissions or for street use where a friction modified fluid is recommended such as a GM Dexron® III or Ford Mercon®. For automatic transmissions calling for a GM Dexron® / Ford Mercon® fluid, we recommend Royal Purple Max ATF.

*Dexron® is a registered trademark of General Motors Corporation.*

*Mercon® is a registered trademark of Ford Motor Company.*

AUTOMATIC TRANSMISSION FLUID



### MAX-CLEAN<sup>®</sup>

Royal Purple Max-Clean is a state-of-the-art high performance synthetic fuel system cleaner that maximizes the performance of your fuel system. Max-Clean restores fuel economy and deeply penetrates and cleans injectors, carburetors, intake valves and combustion chambers.

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



Illustration of before and after effects.

Royal Purple Max-Clean is EPA / CARB Compliant. Safe 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.

Multiple product fleet tests were conducted on various makes and models of vehicles. Royal Purple found that after as little as one treatment Max-Clean can:

#### PERFORMANCE ADVANTAGES

- Improve fuel economy an average of 3.2 - percent
- Restore horsepower an average of 2.6 - percent
- Reduce hydrocarbon, NOx and CO emissions (on average 12, 13 and 18 - percent respectively)
- Prevent rough idle, hesitation and stalling
- Prevent premature spark plug fouling
- Reduce deposit-related engine knocking and pinging
- Stabilizes fuel during off-season and storage
- Superior corrosion and oxidation inhibitor

**NEW 60Z.** - Recommended usage is every 3,000 miles.



Max-Clean FAQs  
listed on pages 38.

Part numbers listed  
on pages 48 – 50.



**20 Oz.** - Recommended usage  
is every 10,000 miles.

#### PART NUMBERS

6x20-Oz. Case	11723
20-Oz. Bottle*	11722
12x6-Oz. Case	12754
6-Oz. Bottle*	11754

\*AVAILABLE IN CASES ONLY

#### RECOMMENDED TREAT RATE

Pour entire contents of can into a nearly empty tank and refuel. 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 two (2) gallons.

## MAX-BOOST®

Royal Purple's New Max-Boost is a high-performance octane booster with 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.

### PERFORMANCE ADVANTAGES

- Reduces engine knocking and pinging
- Raises octane rating up to 30 points or 3 numbers
- Restores power and fuel economy
- Cleans deposits from fuel injectors
- Reduces power loss due to knock-retard in computer controlled vehicles
- Replaces lead additives for protection of non-hardened valve seats
- Stabilizes fuel

### PART NUMBERS

6x16-Oz. Case	06757
16-Oz. Bottle*	11757

\*AVAILABLE IN CASES ONLY

**DIRECTIONS:** One can treats up to 25 gallons of gasoline. 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.



OCTANE BOOST & STABILIZER

**PLEASE NOTE:** Max-Boost is a racing formula and is not street legal. Please consult Royal Purple's automotive technical support department at 281-354-8600 or 888-382-6300 for more information.

Performance engine oils contain higher levels of phosphorus as an anti-wear additive, which can accumulate in catalytic converters and reduce their effectiveness. Max-Boost protects against phosphorus poisoning of catalytic converters.

TECH TIP

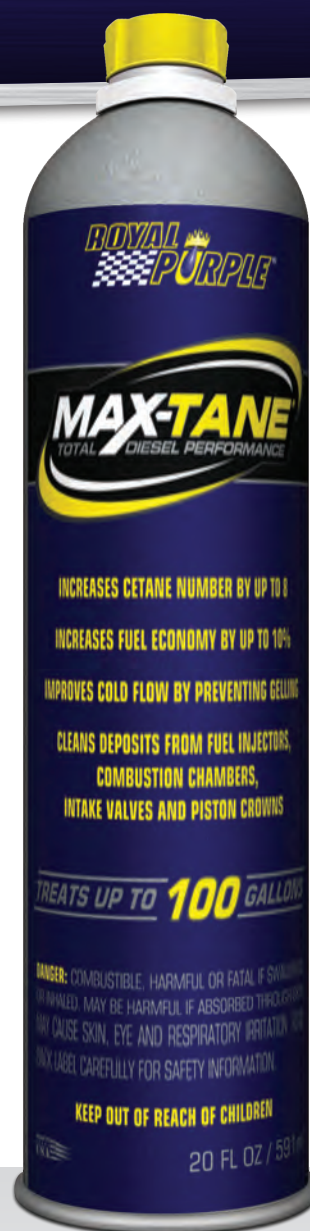
## MAX-TANE<sup>®</sup>

Royal Purple's new 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.

### PERFORMANCE ADVANTAGES

- Increases Cetane Number by 8\*
- Increases fuel economy by up to 10%
- Improves engine startup and reliability in both warm and cold temps
- Improves cold flow by preventing gelling
- Cleans deposits from fuel injectors, combustion chambers, intake valves deposits and piston crowns
- Provides lubricity to entire fuel system
- Reduces smoke and odor

\* When used as directed.



### PART NUMBERS

6x20-Oz. Case	06755
20-Oz. Bottle*	11755
6x10-Oz. Case	06756
10-Oz. Bottle*	11756

\*AVAILABLE IN CASES ONLY

### RECOMMENDED TREAT RATE

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

**DIRECTIONS:** 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.



## MAX EZ®

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.

### TYPICAL PROPERTIES\*

ASTM TESTS		
D-445	Viscosity	
	cSt @ 40°C	48
	cSt @ 100°C	8.5
	SUS @ 100°F	243
	SUS @ 210°F	54
D-2270	Viscosity Index	153
D-92	Flash Point °F	400
	Pour Point °F	-45
D-4052	Density	
	Specific Gravity @ 60°F	0.87
	Pounds / Gallon	7.28

\*PROPERTIES ARE TYPICAL AND MAY VARY.



POWER STEERING FLUID

### PERFORMANCE ADVANTAGES

- Greater wear protection
- Clean, efficient equipment
- Extended pump life
- Much longer fluid life
- Non-foaming
- Outstanding rust / corrosion protection
- High temperature service capability

### PART NUMBERS

12x12-Oz. Case	12326
12-Oz. Bottle*	01326

\*AVAILABLE IN CASES ONLY

Part numbers listed  
on pages 48 – 50.

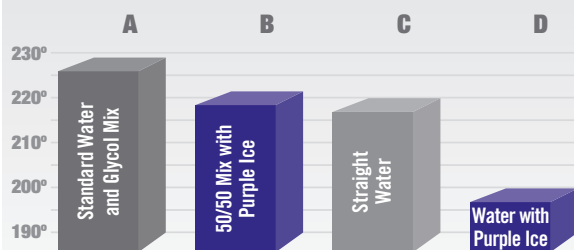
STANDARD PACKAGING:  
12-Ounce Bottle

## PURPLE ICE®

Royal Purple's 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.

### REDUCES 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° 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

### PERFORMANCE ADVANTAGES

- Reduces surface tension of a coolant allowing more heat to transfer outside the radiator resulting in more horsepower
- Reduces hot spots in the engine and cylinder heads, reducing the possibility of engine failure
- Helps prevent overheating, keeps the system clean and extends the life of the water pump
- Purple Ice is safe to use with water-only or antifreeze / water blends
- Purple Ice is compatible with OEM and stock replacement coolants, including extended-life antifreezes
- Purple Ice does not contain glycol and is safe and legal for track use



### RECOMMENDED TREAT RATE\*

- For use with antifreeze:  
1 oz. / quart of cooling system capacity
- For straight water applications:  
2 oz. / quart of cooling system capacity

\* Minimum of 20% antifreeze is recommended in street-driven vehicles.

### PART NUMBERS

12x12-Oz. Case	12600
12-Oz. Bottle*	01600

\*AVAILABLE IN CASES ONLY

#### TECH TIP

Distilled water should not be used in straight water cooling systems with aluminum radiators. Filtered drinking water recommended for such cooling systems.

## ULTRA-PERFORMANCE® GREASE

TYPICAL PROPERTIES*		
ASTM TESTS		NLGI Grade 2
D-445	Viscosity (Base Oil) cSt @ 40°C	150
	Texture	Buttery
	Drop Point °F	520
	Thickener Type (soap base)	Alum. Complex
	Fluid Type	Multi-Synthetic
D-4052	Density	
	Specific Gravity @ 60 °F	0.90
	Pounds / Gallon	7.5
	Cone Penetration, mm	
	Worked, 60 Strokes	285
	Timken OK Load, lbs	100
	Four Ball EP Test	
	Load Wear Index, kg	65.2
	Weld Point, kg	400
	Four Ball Wear Test	
	Scar diam, mm, 40k	
	1200 rpm, 165°F, 1hr.	<0.6
	Copper Strip Corrosion	1A
	Water Spray Off, %	<5.0
	Oil Separation	
	(FTMS 791B, M 321.2)	<5.0
	100°F / 20% Salt	
	(NaCl), 360+ Hours	Pass

\*PROPERTIES ARE TYPICAL AND MAY VARY.

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

UPG satisfies a wide range of grease requirements from the lubrication of bearings to u-joints and general-purpose use. It has outstanding extreme pressure capabilities and excellent water resistance to both emulsion and washout. 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.



GREASE

### PART NUMBERS

30-Tube Case	30312
10-Tube Case	10059
1-Tube*	01312

\*AVAILABLE IN CASES ONLY



## ROYAL PURPLE<sup>®</sup> SYNTHETIC GUN OIL

Royal Purple Synthetic Gun Oil is recommended for cleaning of all firearms after use and for preserving them while in storage.

Royal Purple Synthetic Gun Oil is an advanced, high performance lubricant that is specifically formulated to provide exceptional wear protection as well as protection against saltwater and rust corrosion. It also prevents fouling.

Royal Purple Synthetic Gun Oil works well in a variety of temperatures and will not thicken in cold weather. Its performance advantages stem from Synerlec<sup>®</sup>, Royal Purple's proprietary additive technology.

In addition to gun applications, Royal Purple Synthetic Gun Oil can also be used for fishing tackle, locks and hinges.

### PERFORMANCE ADVANTAGES

- Easily applied
- Long lasting
- Excellent for preserving and protecting parts in storage
- Excellent corrosion protection
- Environmentally responsible

### PART NUMBERS

12x4-Oz. Case	10039
4-Oz. Can*	10036

\*AVAILABLE IN CASES ONLY



*"I've tried every gun lube out there and none of them compare to Royal Purple."*

—Bobby Fowler, Jr.  
 World Champion Sporting Clay Shooter  
 and Elite Shooting School Instructor

## MAXFILM®

Royal Purple Maxfilm is a high film strength, multipurpose, synthetic lubricant / penetrant that excels in a wide array of applications. Maxfilm deeply penetrates, cleans 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's proprietary Synerlec® additive technology, which is proven to make equipment run smoother, cooler, quieter, longer and more efficiently. Maxfilm uses a non-petroleum (CO<sub>2</sub>) propellant.

### PERFORMANCE ADVANTAGES

- Greater wear protection
- Clean, efficient equipment
- Extended pump life
- Much longer fluid life
- Non-foaming
- Outstanding rust / corrosion protection
- High temperature service capability

### TYPICAL PROPERTIES\*

ASTM TESTS		
D-445	Viscosity	
	cSt @ 40°C	7.1
	cSt @ 100°C	2.1
	SUS @ 100°F	50
D-2270	SUS @ 210°F	33
	Viscosity Index	101
	Aerosol Flash °F	215 min.

\*PROPERTIES ARE TYPICAL AND MAY VARY.



### 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
- Use as a manual cutting fluid to facilitate the ease of hand drilling, tapping, metal cutting, etc., of steel and aluminum

### PART NUMBERS

12x11-Oz. Case	15000
11-Oz. Can*	05000
12x4-Oz. Case	12035
4-Oz. Can*	10035

\*AVAILABLE IN CASES ONLY

STANDARD PACKAGING:  
11-Ounce Cans  
4-Ounce Cans

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

**TECH TIP**

PENETRATING LUBRICANT

## MAX-CHAIN®

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 can lubricate up to 400°F (after carrying solvent has evaporated) and provides excellent protection against rust and corrosion. Max-Chain uses a non-propellant CO<sub>2</sub> propellant.

### PERFORMANCE ADVANTAGES

- Easily applied
- Long lasting
- Excellent for dusty environments
- Protects heavily loaded surfaces
- Excellent corrosion protection
- Environmentally responsible

#### PART NUMBERS

12x4-Oz. Case	12407
4-Oz. Can*	11407

\*AVAILABLE IN CASES ONLY



### TYPICAL PROPERTIES\*

#### ASTM TESTS

D-445	Viscosity	
	cSt @ 40°C	4.9
	cSt @ 100°C	1.7
	SUS @ 100°F	43
	SUS @ 210°F	32
	Aerosol Flash °F	200 min.

\*PROPERTIES ARE TYPICAL AND MAY VARY.

#### TECH TIP

For best results shake Max-Chain well before each use and use the can in upright position to maximize aerosol propellant life.

**STANDARD PACKAGING:**  
 4-Ounce Cans



## SYNFILM® RECIP. 100

Royal Purple Synfilm Recip. 100 is recommended for lubrication of reciprocating air compressors (piston type) that specify a SAE 30 or a “non-detergent” 30 weight oil.

Synfilm Recip. 100 is a long life, high film strength, energy efficient, synthetic lubricant that significantly increases the reliability and efficiency of reciprocating air compressors and reciprocating shop compressors. It excels at reducing wear and keeping discharge valves free of harmful carbon deposits. Synfilm Recip. 100 forms a better seal and reduces friction between the cylinder wall and piston rings for greater compressor efficiency. It is formulated with Royal Purple’s unique, proprietary Synerlec additive technology, which is proven to make equipment run smoother, cooler, quieter, longer and more efficiently.

### PERFORMANCE ADVANTAGES

- High film strength
- Rapidly separates from water
- Saves energy
- Synthetic solvency
- Longer oil life
- Excellent corrosion protection
- Compatible with other oils
- Environmentally responsible

### PART NUMBERS

4-Gal. Case	44513
1-Gal. Bottle*	04513
12-Qt. Case	12513
1-Qt. Bottle*	01513

\*AVAILABLE IN CASES ONLY



### TYPICAL PROPERTIES\*

ASTM TESTS		ISO Grade
		100
D-445	Viscosity	
	cSt @ 40°C	100
	cSt @ 100°C	10.1
	SUS @ 100°F	560
	SUS @ 210°F	61
D-92	Flash Point °F	460
	Pour Point °C	-39
D-4052	Density	
	Specific Gravity @ 60°F	0.957
	Pounds / Gallon	7.98
D-664	Acid Number	0.23
D-1401	Demulsibility	40/40/0/30
D-892	Foam Tests	
	Sequence I, II, & III	Pass
D-130	Copper Corrosion	
	3 hrs. @ 210°F	1a
	250 hrs. @ 210°F	1a
	Cincinnati Millicron “A”	
	Corrosion / Oxidation	Pass
D-665	Rust Test	
	Fresh Water	Pass
	Salt Water	Pass
D-2893	Dry Air Oxidation	
	312 hrs. @ 203°F,	
	% Viscosity Increase	0
	Precip. No. (% Solids)	0

\*PROPERTIES ARE TYPICAL AND MAY VARY.

Part numbers listed  
on pages 48 – 50.

STANDARD PACKAGING:  
1-Quart Bottles  
1-Gallon Bottles

## MAX-TUFF<sup>®</sup>

Royal Purple Max-Tuff is an ultra-tough, synthetic lubricant. It's designed for use in the build or repair of any mechanical component that needs immediate lubrication and protection from the first use. Max-Tuff utilizes unique, synthetic molecules that adhere to metal surfaces to create a formidable, load-bearing physical barrier between surfaces. This minimizes the metal-to-metal contact and wear in boundary lubrication conditions. It also provides excellent protection against rust and corrosion of both ferrous and nonferrous metals.

### PERFORMANCE ADVANTAGES

- Greater wear protection
- Clean, efficient equipment
- Extends equipment life
- Compatible with conventional mineral and synthetic oils
- Non-foaming
- Outstanding rust / corrosion protection
- High temperature service capability

### TYPICAL PROPERTIES\*

ASTM TESTS		
D-445	Viscosity	
	cSt @ 40°C	650
	cSt @ 100°C	47
	SUS @ 100°F	3,450
	SUS @ 210°F	229
D-2270	Viscosity Index	122
D-92	Flash Point °F	375
	Pour Point °C	-39
D-4052	Density	
	Specific Gravity @ 60 °F	0.879
	Pounds / Gallon	7.33

\*PROPERTIES ARE TYPICAL AND MAY VARY.



### PART NUMBERS

12x8-Oz. Case	12335
8-Oz. Bottle*	01335
50x2-Oz. Case	10552
2-Oz. Bottle*	10553

\*AVAILABLE IN CASES ONLY

## MOTOR OILS

### What is the difference between HPS and Royal Purple API-licensed motor oils?

Royal Purple API-licensed motor oil is formulated specifically to meet current American Petroleum Institute (API)<sup>1</sup>, International Lubricant Standardization and Approval Committee (ILSAC), and Association des Constructeurs Européens d'Automobiles (ACEA) specifications for new vehicle warranties. Over the last several years, these specifications have become increasingly restrictive on certain additives, particularly those commonly used for anti-wear. As such, API/ILSAC compliant oils aren't the best solution for consumers that have modified their vehicles or those simply looking for the greatest performance.

HPS is formulated with consumers in mind. This motor oil line offers the incredible performance and protection provided by Royal Purple's proprietary Synerlec technology as well as a dramatically enhanced anti-wear package. HPS is also the choice for those seeking to maximize horsepower and torque, while reducing wear, heat and fuel consumption. HPS is the most robust engine oil Royal Purple makes for non-racing applications.

### Will HPS harm my catalytic converters?

No. Testing has shown no short or long term adverse affects on catalysts in mechanically sound vehicles.

### Can I use HPS in my diesel engine?

Absolutely. All viscosities of HPS, excluding 5W-20, are formulated for use in gas and/or diesel engines and as such 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.

### Can your motor oil be used in older engines?

Yes. Mileage and/or age is not a factor when used in a mechanically sound engine. In high-mileage applications, we do recommend running a minimum of two short 3,000 mile (5,000 km) intervals before extending the oil drain intervals. This will enable Royal Purple's high solvency to remove existing deposits gradually; if excessive, such deposits can restrict oil flow, as well as reduce the oil service life significantly.

### Can I use Royal Purple in my brand new car?

Yes. Royal Purple currently offers many viscosity grades of API-licensed motor oils<sup>1</sup>. To allow for proper break-in of the engine, Royal Purple recommends waiting until the manufacturer's first scheduled oil change or a minimum of 2,000 miles (3218 km) in new gasoline engines. Allow a minimum of 6,000 miles (9656 km) before using Royal Purple in diesel engines.

### How many miles can I go between oil changes in vehicles that use gasoline?

Royal Purple suggests adhering to manufacturer's recommended oil change intervals for vehicles under warranty using Royal Purple API-licensed SAE motor oils. With Royal Purple HPS, drain intervals may be extended to 12,000 miles (20,000 km) or one year, whichever occurs first in street-driven, mechanically-sound vehicles. For guidelines specific to your vehicle, we recommend contacting our technical department 888-382-6300.

### How many miles can I go between oil changes in vehicles that use diesel engine oil?

Royal Purple suggests adhering to manufacturer's recommended oil change intervals for vehicles under warranty. Vehicles no longer under warranty using Royal Purple 15W-40 diesel engine oil can extend oil change intervals up to 15,000 miles (24,140 km) or one year, whichever occurs first in street-driven, mechanically-sound vehicles. For guidelines specific to your vehicle, we recommend contacting our technical department at [rpautotech@royalpurple.com](mailto:rpautotech@royalpurple.com)

### Is Royal Purple synthetic motor oil?

Yes. Royal Purple Motor Oils are composed of a proprietary formulation of synthetic base oils and synthetic additives containing iso-paraffinic diluents.

Royal Purple Break-in oil is the only non-synthetic automotive engine oil offered by Royal Purple.

<sup>1</sup> API (American Petroleum Institute)

## MOTOR OILS

### **Will synthetic oil cause my engine to leak or consume more oil?**

Properly formulated synthetic oils will generally not cause an engine oil leak. Synthetic oils possess a higher degree of natural solvency, which can clean and remove deposits left by previous oils. The removal of extensive oil deposits can expose marginal or damaged oil seals, which may then leak. If an engine currently has excessive oil consumption (i.e. greater than 1 quart / 1,000 miles) the recommended course of action is to solve the oil consumption problem before switching to a synthetic.

### **Should I use an oil additive with Royal Purple?**

No. We strongly recommend against using any oil additives as do most automotive manufacturers. Engine oils are formulated with a fine balance of additives (anti-foam, corrosion inhibitors, anti-wear, detergent / dispersants, oxidation inhibitors), and more is not necessarily better. The use of an oil additive could upset the balance resulting in reduced performance.

### **Does Royal Purple maintain its 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.

### **Do your motor oils contain zinc/phosphorus?**

Yes. All Royal Purple engine oils contain the zinc/phosphorus compound zinc dialkyl dithiophosphate (ZDDP), but the maximum amounts are restricted by the current API oil specifications. For stock, non-performance automotive street applications that have flat tappet cams, API SN licensed oils are OK. For better wear protection, Royal Purple HPS and XPR lines of engine oils are formulated with a higher concentration of the zinc and phosphorus anti-wear additive and are suitable for ALL flat tappet and roller tappet camshaft valve trains. For a specific recommendation, contact our tech department at 888-382-6300.

### **Can your oil be used with flat tappet cams?**

Yes. For stock, non-performance flat tappet valve trains, Royal Purple SAE oils (API SN and ILSAC GF-5 licensed) are OK. For upgraded performance flat tappet camshafts, and vintage high performance engines, we recommend our HPS or XPR engine oils. For a specific recommendation, contact our tech department at 888-382-6300.

### **Is a special oil filter required when using Royal Purple?**

While no special oil filter is required, we do recommend upgrading to a high quality oil filter. A high quality filter will prevent contaminants from circulating through the system and causing damage.

Royal Purple now offers extended life oil filters. See our oil filter information page for more details or visit our dealer locator to find the dealer nearest you that carries our new filters.

### **Is HMX different from your SAE/API engine oils?**

Yes, HMX is fortified with Royal Purple's proprietary Synerlec® additive technology as well as additional seal conditioners beneficial to higher mileage engines to maintain elasticity of gaskets and seals. Further, HMX is formulated with a modified detergent/dispersant package and will possess greater ability to neutralize acids and corrosion.

### **Why should I use a high mileage oil?**

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

### **Will I get a cost benefit or return?**

Yes, with HMX you get better power reducing fuel consumption. As well, HMX can safely extend drain intervals increasing consumers' return on investment.

## OIL FILTER

### **Are Royal Purple Filters compatible with all conventional and synthetic oils?**

Yes. All Royal Purple Premium Oil Filters are compatible with both types of motor oils.

### **Do Royal Purple Filters meet all original equipment requirements and vehicle warranty?**

Royal Purple Filters meet or exceed original equipment manufacturers' requirements. All new car warranties remain in effect when using Royal Purple Filters.

### **How does the quality of Royal Purple Filters compare with other manufacturers'?**

Royal Purple Premium Filters use 100% synthetic micro-glass media for superior particle removal with 99% filtration



efficiency at 25 microns and larger, and 80% of particles 10 microns and larger.

### **What is the recommended change interval?**

Vehicles under warranty should follow the vehicle manufacturer's recommended change intervals. Vehicles no longer under warranty and in good condition may extend filter changes to 12,000 miles (20,000 km) if they are driven under normal operating conditions and are using Royal Purple motor oil or another major brand of synthetic motor oil. Vehicles using a diesel oil filter no longer under warranty and in good condition may extend filter changes to 15,000 miles (24,140 km) if they are driven under normal operating conditions and are using Royal Purple motor oil or another major brand of synthetic motor oil. Vehicles driven in severe conditions should follow the change intervals recommended in their owner's manual; severe conditions are defined as racing or commercial applications, frequent towing or hauling, extremely dusty or dirty conditions, or excessive idling.

### **What is the efficiency rating and at what micron size?**

The efficiency of a filter is described in terms of a percentage of particles caught at a certain particle size (and larger). Using the ISO 4548-12 multi-pass filtration efficiency test, Royal Purple filters are:

- 99% at 25 micron and larger
- 98.7% at 20 micron and larger
- 80% at 10 micron and larger

### **What function does the wire-backed media provide?**

The wire backing is to support the filtration media. This further reduces the chance that the filter media could collapse. The use of stainless steel wire provides a strong, durable, AND low restriction way to provide the support.

### **Are all Royal Purple Premium Oil Filters constructed with a silicone anti-drain back valve? Why silicone?**

Yes, the silicone anti-drain back valve prevents dry starts by preventing oil drain-back during shutdown. Silicone outperforms and outlasts standard rubber in both extreme cold and hot oil temperatures.

### **What are the beta ratios?**

Average beta rating based on ISO 4548-12 multi-pass test methods:

B100 = 25 (which means at 25 or greater micron; media is 99% efficient.)

B75 = 20 (which means at 20 or greater micron; media is 98.7% efficient. Also considered absolute rating.)

B5 = 10 (which means at 10 micron or greater; media is 80% efficient.)

## **MOTORCYCLE OILS**

### **What viscosity is recommend for motorcycles?**

Follow the manufacturer's recommendations regarding viscosity. Most manufacturers recommend a 10W-40 for 4-cycle, liquid-cooled motorcycles. Air / oil cooled motorcycles typically specify a 20W-50. Check your owner's manual for verification or contact Royal Purple's Automotive Technical Department at 888-382-6300 for assistance.

### **How many miles can I go between oil changes?**

Royal Purple suggests adhering to manufacturer's recommended oil change intervals for vehicles under warranty. Vehicles that are no longer under warranty can frequently double or triple the number of miles between oil changes depending on the vehicle, its condition, the way it's used (excessive idling), and the oil filter that is used. For guidelines specific to your vehicle, we recommend contacting our technical department at [rpautotech@royalpurple.com](mailto:rpautotech@royalpurple.com).

### **What product do you recommend for 2-cycle gearboxes?**

For motorcycle 2-cycle and 4-cycle gearboxes with a separate reservoir, Synchronax manual transmission fluid or Max-Cycle 10W-30 is recommended.

### **What do you recommend for the primary case and transmission?**

Royal Purple Max-Cycle 10W-30, 10W-40 or 20W-50 motor oil may be used in the primary tank. For transmissions, Royal Purple recommends Max-Cycle 20W-50 or Max Gear 75W-90. NOTE: DO NOT use Max Gear lubricants in the primary or in any other component containing a wet clutch.

## MOTORCYCLE OILS

### What oil do you recommend for Harley Davidson motorcycles?

For Evolution and Twin Cam motors, Royal Purple Max-Cycle 20W-50 is recommended. If the owner's manual lists a 10W-40 or 15W-40, Max Cycle 10W-40 may also be used.

### Will Royal Purple Max Cycle cause my clutch to slip?

No. Royal Purple provides exceptional film strength for excellent metal-to-metal protection. Royal Purple Max Cycle oils are rated JASO MA2 for wet clutch compatibility.

### I notice a strange odor when running Max-Cycle in my Harley. Is this normal?

Yes. Royal Purple uses a different additive chemistry than most manufacturers, which is the very foundation of the benefits RP offers. This technology has a distinctive odor, different from the common odor of exhaust gases to which most have become immune.

## 2-CYCLE OILS

### Can I use Royal Purple to pre-mix with alcohol, methanol or nitro-methane?

No. Royal Purple's 2-cycle oils are formulated for use in gasoline applications only.

### What product do you recommend for oil injected engines?

HP 2-C is recommended for most stock oil-injection applications. For cold weather oil-injection applications, Snow 2-C is recommended.

### What product do you recommend for pre-mix in my 2-cycle engine?

HP 2-C may be used in pre-mix applications.

### What product should I use in my oil-injected snow machine?

For low temperature, oil-injected applications, Royal Purple Snow 2-C is recommended.

### Does Royal Purples 2 cycle oil void a new engine Warranty?

Royal Purple HP 2-C meets the performance requirements of any 2-stroke gasoline engine; however it does not carry any OEM oil licenses.

## RACING OILS

### Can I use racing oils in my street car?

Yes. Royal Purple XPR racing oils are fully formulated engine oils with complete additive packages needed for long-term use. XPR's ultra-light viscosities, XPR 3.1 and 0W-10 are typically only suitable for dedicated competition engines that are built to use low viscosity engine oils. Non-ultra light viscosities, XPR 5W-20, 5W-30, 10W-40 and 20W-50 may be used in street driven and daily driver applications, street and track duty vehicles and dedicated competition applications with gasoline or exotic fuels. Please note: Royal Purple XPR racing oils do not conform to API and/or ILSAC licensing requirements and should not be used when manufacturer's warranties are an issue.

### Can I run your oils with exotic fuels (alcohol, methanol, etc.)?

Yes. Royal Purple's lubricants can be used with exotic fuels. For the best protection, Royal Purple has formulated its XPR specifically with this in mind. The XPR oils are formulated to combat fuel emulsification to hold up even better than Royal Purple's other engine oils in alcohol and methanol applications. Royal Purple Nitro Plus oils are the best choice for blown alcohol, Nitro-methane and any other race application with excess fuel dilution. Royal Purple's other synthetic engine oils will still perform better than conventional racing oils; however, significant fuel dilution will reduce the effectiveness of these oils much more than the XPR and Nitro Plus oils.

### How will running your product affect my oil temperature?

In most cases, vehicles with properly functioning cooling systems can reduce oil temperatures by 5-20°F by using Royal Purple.

### What is the difference between your SAE motor oils and your racing oils?

Royal Purple's motor oils are formulated to provide unparalleled performance and protection and comply with API / ILSAC specifications. Its racing oils vary in viscosity and formulation as compared to the SAE motor oils to provide the greatest performance gains possible without regard to API, SAE and / or ILSAC specifications.

**My retailer doesn't carry XPR – why can't they order it?**

We do not restrict any automotive product from any retailers that carry Royal Purple consumer products. Any lack of availability of Royal Purple products at local retail stores is due to the choices made by the store owners/buyers. Retailers choose the products they stock and order for a myriad of reasons. Many times, a local retailer will special order Royal Purple products if you can provide the part number. Another option is to shop online. Several online retailers, including Amazon.com, JEGS.com, Lucky7Trucks.com, PacePerformance.com, and SummitRacing.com carry just about all Royal Purple automotive and consumer products, and they will ship directly to you.

**Is it true that your oils lose their performance edge after six or eight passes? (Drag Racing)**

No. Royal Purple has not found any evidence that it shows deterioration in performance after being subjected to race conditions. It is possible that fuel dilution contamination may start to hinder the performance of the engine oil; however, dyno results do not support this claim.

**MARINE OILS****How do I determine what viscosity to use, if I do not have an owner's / operator's manual?**

Most all 4-stroke gasoline marine engines recommend a multi-viscosity 30 or multi-viscosity 40 weight engine oil. The most common is the 40 weight with the most common exceptions being Honda and Suzuki outboard motors.

**How often should I change my oil in my boat engine using Royal Purple?**

After the first 1 - 2 oil changes with the Royal Purple HPM motor oil, we recommend up to 3 times the hours listed in the owner's / operator's manual, or 12 months, whichever comes first.

**How often should I change my lower unit oil using Royal Purple?**

Assuming there is no contamination from foreign substances, we recommend up to 3 times the hours or time listed in the owner's / operator's manual, whichever comes first.

**I noticed that HPM engine oils can be used in place of several viscosity grades of oil. Which one is right for my engine?**

HPM oils are intended for 4-stroke, gasoline marine engines. If the factory recommends 10W-30 or SAE 30, Royal Purple HPM 10W-30 is the best choice. If the factory recommends 10W-40, 15W-40, 20W-40 or 25W-40, Royal Purple HPM 10W-40 is the best choice.

**How can I tell if HPM 80W-90 gear oil is right for my lower unit/outdrive?**

When looking at a SAE gear oil viscosity grade, the last number is most important. If the factory recommends 75W-90, 80W-90, or SAE 90 (straight 90 weight) gear oil, Royal Purple HPM 80W-90 will work great in your lower unit/outdrive.

**What fuel-oil ratio should be used with HP 2-C?**

We recommend starting with the ratio recommended by the equipment manufacturer. Typically this can be leaned-out a little, but it is highly equipment specific.

**I have a 2-stroke outboard engine. Can I use HPM engine oil?**

For 2-stroke engines, we recommend Royal Purple HP 2-C 2 cycle oil. It works great in pre-mix or oil injected applications. For pre-mix, we recommend using the manufacturer recommended mix ratio.

**TRANSMISSION AND 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 20.

**My vehicle has a limited-slip differential. Do I need to add additional friction modifiers when using your Max Gear?**

No. All viscosities of Max Gear are formulated with hypoid friction modifiers necessary for use in clutch or cone differentials. No additional additives are necessary.



## TRANSMISSION AND GEAR OILS

### **My vehicle's transmission specifies an API GL-4 gear oil. Can I use Max Gear?**

Yes. Max Gear is completely non-corrosive to soft yellow metals (brass, bronze, copper) so it is synchronizer-safe like a GL-4 gear oil. However, because of Royal Purple's proprietary Synerlec additive technology, Max Gear oils retain the load carrying and shock protection capability of a GL-5 gear oil.

## 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 breaking down any further, and allow it to be safely used without forming engine deposits.

### **How long does Max-Clean stabilize fuel?**

Fuel can be stabilized to 1 year for gasoline/ethanol blends up to E15, and to 9 months for higher ethanol concentrations like E85.

### **With what fuels does Max-Clean work?**

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.

### **How does Max-Clean remove deposits?**

It contains polyetheramine (PEA), a proprietary detergent that solubilizes deposits so they can be burned during the combustion cycle in an engine.

### **Does Max-Clean increase octane?**

No, but a cleaner burning engine has a reduced octane requirement, which allows less expensive, lower octane gasoline to be used without the risk of detonation.

### **What is the recommended treat rate for Max-Clean?**

Pour entire contents of can into a nearly empty tank and refuel. 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 two (2) gallons. Royal Purple recommends using the 6 ounce can ever 3,000 miles (4,828 km) and the 20 ounce can every 10,000 (16,093 km).

### **What makes Max-Boost any better than other octane boosters?**

Royal Purple Max-Boost provides up to 30 points (3 octane numbers) increase in fuel octane, which meets or exceeds the boost of any other consumer octane boosting product available, and it carries the added benefits of stabilizing fuel, cleaning deposits, and providing protection for non-hardened exhaust valve seats (lead substitute). It effectively replaces 2 to 4 products, depending on your needs.

### **How do I use Max-Boost?**

Each 16 ounce can of Max-Boost treats between up to 25 gallons with maximum effective dosage at about 1 ounce of Max-Boost per gallon of fuel. To ensure best mixing with fuel, it is best to add Max-Boost to your fuel tank at fill-up, prior to putting the fuel into the tank.

### **Is Max-Boost a good product for any vehicle?**

Max-Boost is safe for use in any gasoline and gasoline/ethanol blend of fuel, but many non-performance cars do not benefit from high octane fuel. If the fuel stabilization and cleaning benefits of Max-Boost are what you want, rather than the increase in octane, we recommend Royal Purple Max-Clean Fuel System Cleaner & Stabilizer.

### **I have a [carbureted/throttle body injected/port injected/direct injected] performance engine. Will Max-Boost work for me?**

Yes, Max-Boost works in any gasoline or gasoline/ethanol blend fuel delivery system and will work great for any engine that runs best with high octane fuel.

### **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-Boost 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 do I use Max-Tane?**

Royal Purple Max-Tane is available in 10 ounce and 20 ounce cans. Each 10 ounce can treats up to 50 gallons of fuel and each 20 ounce can treats up to 100 gallons of fuel. To ensure best mixing with fuel, it is best to add Max-Tane to your fuel tank at fill-up, prior to putting the fuel into the tank.

**I have a high performance diesel engine. What is the best treat-rate (dose) of Max-Tane?**

The minimum recommended treatment rate of diesel fuels with Max-Tane is (1) ounce for every (5) gallons of diesel fuel (10oz can treats 50 gallons; 20 oz can treats 100 gallons). Extra benefit can be obtained for high performance applications by increasing to the maximum effective treat-rate of (1) ounce of Max-Tane for every (2) gallons of diesel fuel (10oz can treats 20 gallons; 20 oz can treats 40 gallons).

**PURPLE ICE****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.

**Is Purple Ice compatible with anti-freeze in my car?**

Purple Ice is compatible with all current OEM/factory and major brand automotive anti-freeze. This includes traditional green ethylene glycols, as well as OAT/HOAT antifreezes (e.g. DexCool; Ford and Chrysler orange, gold, pink; European and Japanese OEM red, pink, etc.).

**What water / antifreeze concentration is recommended when using Purple Ice?**

Purple Ice may be added to any antifreeze / water mix; however, testing has shown higher water concentrations yield greater cooling benefits. While Purple Ice does contain corrosion inhibitors as well as lubricants to compensate for a lower antifreeze / water concentration, Royal Purple recommends using a concentration of antifreeze appropriate for the cold winter temperatures in your area because Purple Ice offers no freeze or boiling protection. The preferred coolant mix would contain a minimum of 20% antifreeze (offers 12°F protection) to provide a higher boiling point, and greater corrosion and deposit protection for the coolant, along with 1 to 2 ounces of Purple Ice per quart of coolant.

**How much Purple Ice do I need to add to my cooling system?**

When using Purple Ice with an antifreeze / water mix, Royal Purple recommends adding 1 ounce of Purple Ice per quart of cooling system capacity. For straight water (racing) applications, Royal Purple recommends adding 2 ounces of Purple Ice per quart of cooling system capacity.

**How often should I add Purple Ice to my radiator?**

When used with antifreeze, Purple Ice should be added once a year or every 30,000 miles (48,280 km), whichever comes first, in order to maintain proper performance. When using Purple Ice in a cooling system running straight water, Purple Ice should be added once a year or every 15,000 miles (24,140 km), whichever comes first.

**Will adding too much Purple Ice harm my cooling system?**

No, a higher concentration of Purple Ice than recommended will not harm the cooling system or engine. However, going well beyond 2 ounces of Purple Ice per quart of coolant won't offer any additional cooling benefit, but may result in some foam generation in the system.

**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.

## GENERAL APPLICATIONS

This is a general outline. Always follow manufacturer's recommendations for oil viscosities or contact Royal Purple's Automotive Technical Support Department at 888-382-6300.

### AUTOMOTIVE

#### ENGINES

Gasoline	Royal Purple Motor Oils*
Diesel	15W-40
European Passenger Car & Small Diesel	0W-40 5W-40

#### TRANSMISSIONS

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

#### POWER STEERING

Power Steering	Max EZ
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#### REAR ENDS

Heavy Duty	Max Gear 75W-90 Max Gear 85W-140
Light Truck & Passenger Car	Max Gear 75W-90 Max Gear 75W-140

### 4-CYCLE MOTORCYCLE

#### LIQUID-COOLED JAPANESE

Engine	Max-Cycle 10W-30 Max-Cycle 10W-40
Final Drive - Chain	Max-Chain
Shaft Drive	Max Gear 75W-90

#### LIQUID COOLED - EUROPEAN

Engine	Max-Cycle 10W-30 Max-Cycle 10W-40
Final Drive - Chain	Max-Chain
Shaft Drive	Max Gear 75W-90

### 4-CYCLE MOTORCYCLE, CONT.

#### AIR / OIL COOLED METRIC

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

#### AIR / OIL COOLED DOMESTIC

Buell	
Engine	Max-Cycle 20W-50
Transmission	Max-Cycle 10W-30
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-30 Max-Cycle 20W-50

### OFF-ROAD / DUAL SPORT: 2-C, 4-C

#### 4-CYCLE

Engine	Max-Cycle 10W-30 Max-Cycle 10W-40
Transmission	
- Separate Tank	Synchromax Max-Cycle 10W-30 Max-Cycle 10W-40
Final Drive - Chain	Max-Chain
Final Drive - Shaft	Max Gear 75W-90

#### 2-CYCLE

Engine	
Pre-mix	HP 2-C
Racing	
Oil Injection	HP 2-C
Transmission	Synchromax
Final Drive - Chain	Max-Chain

\*CONSULT ROYAL PURPLE'S TECHNICAL SUPPORT DEPARTMENT FOR RECOMMENDATIONS.

For information about Royal Purple's LIMITED WARRANTY visit [RoyalPurple.com](http://RoyalPurple.com)

## GENERAL APPLICATIONS

### OFF-ROAD / DUAL SPORT: 2-C, 4-C, CONT.

#### AIR / OIL COOLED METRIC

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

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

#### 4-CYCLE

Engine	Max-Cycle 10W-30 Max-Cycle 10W-40
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Transmission - Separate Tank	Synchromax Max-Cycle 10W-30 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	HPM 10W-30
	HPM 10W-40 HPS 10W-30 HPS 10W-40
Outdrive/Lower Unit	HPM Gear Lube 80W-90 Max Gear 75W-90

#### 2-CYCLE

Engine	
Pre-mix and Oil-injection	HP 2-C
Outdrive/Lower Unit	HPM Gear Lube 80W-90 Max Gear 75W-90

### MARINE APPLICATIONS

#### BOATS

Inboard	
4-Cycle Gasoline Engine	HPM 10W-30 HPM 10W-40 HPS 10W-30 HPS 10W-40
4-Cycle Diesel Engine	15W-40 HPS 10W-40
Outdrive/Lower Unit	HPM Gear Lube 80W-90 Max Gear 75W-90

Outboard	
4-Cycle Engine	HPM 10W-30 HPM 10W-40 HPS 10W-30 HPS 10W-40

2-Cycle Engine Pre-mix	HP 2-C
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Oil Injection Outdrive/Lower Unit	HP 2-C HPM Gear Lube 80W-90 Max Gear 75W-90
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### SNOWMOBILE & SNOW MACHINE

#### 4-CYCLE

Engine	Max-Cycle 10W-30 Max-Cycle 10W-40
Transmission/Chain Case	Synchromax* Max-Cycle 10W-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 brgs)	Ultra Performance Grease



## HIGH PERFORMANCE & RACING APPLICATIONS

This is a general outline. Always follow manufacturer's recommendations for oil viscosities or contact Royal Purple's Automotive Technical Support Department at 888-382-6300.

### AUTOMOTIVE

#### ENGINES

Drag Racing*	HPS 10W-30 HPS 10W-40 HPS 20W-50 XPR 3.1 XPR 0W-10 XPR 5W-20 XPR 5W-30 XPR 10W-40 XPR 20W-50
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Midgets	XPR 5W-30 XPR 10W-40 XPR 20W-50
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Sprint Cars	XPR 5W-30 XPR 10W-40 XPR 20W-50
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Late Models*	HPS 10W-30 HPS 10W-40 HPS 20W-50 XPR 5W-30 XPR 10W-40 XPR 20W-50
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Road Racing*	HPS 10W-30 HPS 10W-40 HPS 20W-50 XPR 5W-30 XPR 10W-40 XPR 20W-50
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Super Speedway	XPR 10W-40
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### AUTOMOTIVE, CONT.

#### AUTO TRANSMISSIONS

Max ATF  
Racing 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 5W-20

#### CHAINS

Max-Chain

### MARINE

#### ENGINES

2-Cycle	HP 2-C
4-Cycle	HPM 10W-30 HPM 10W-40 XPR 5W-30 XPR 10W-40

\*CONSULT ROYAL PURPLE'S TECHNICAL SUPPORT DEPARTMENT FOR RECOMMENDATIONS.

## HIGH PERFORMANCE & RACING APPLICATIONS

### MOTORCYCLE & ATV

#### ENGINES

2-Cycle	
Pre-mix and Oil-injection	HP 2-C
4-Cycle*	
- Gas	XPR 5W-20 XPR 5W-30 XPR 10W-40 XPR 20W-50
- Liquid-Cooled	XPR 0W-10 XPR 5W-20 XPR 5W-30 XPR 10W-40 Max-Cycle 10W-30 Max-Cycle 10W-40
- Air- / Oil-Cooled	XPR 20W-50 Max-Cycle 20W-50
- N20 & Exotic Fuel	XPR 5W-20 XPR 10W-40

#### TRANSMISSION

Separate Tank	Synchromax Max Cycle 10W-30 Max Cycle 10W-40 Max Cycle 20W-50 XPR 10W-30 XPR 10W-40 XPR 20W-50
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#### FINAL DRIVE

Chain	Max-Chain
Shaft	Max Gear 75W-90

### SNOW MACHINE

#### ENGINES

2-Cycle Pre-mix or Mod. Oil Injection	HP 2-C
2-Cycle Stock Oil Injection	Snow 2-C
4-Cycle	XPR 5W-20 XPR 5W-30 XPR 10W-40

#### TRANSMISSIONS/CHAIN CASES

Synchromax

\*FOLLOW MANUFACTURER'S VISCOSITY RECOMMENDATIONS

This is a general outline. Always follow manufacturer's recommendations or contact Royal Purple's Automotive Technical Support Dept. at 888-382-6300.

# TRANSMISSION LUBRICANT CROSS REFERENCE

TRANSMISSION	LUBRICANT SPEC / PART NUMBER	ROYAL PURPLE'S RECOMMENDATION
<b>AUTOMATIC TRANSMISSION</b>		
See Max ATF Specs Page 20		
<b>MANUAL TRANSMISSION</b>		
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 10W-40
Bert & Brinn		Synchromax
Liberty & G-Force		Synchromax
APPLICATION	OEM SPEC # / PART #	ROYAL PURPLE RECOMMENDED
<b>AUDI / VW</b>	G-052-145	Max Gear 75W-90
<b>BMW / MINI</b> 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 XPR 5W-20 Max Gear 75W-140 Max Gear 75W-90

CONTACT ROYAL PURPLE'S TECH. DEPARTMENT FOR A PRODUCT SHEET.

This is a general outline. Always follow manufacturer's recommendations or contact Royal Purple's Automotive Technical Support Dept. at 888-382-6300.

TRANSMISSION	LUBRICANT SPEC / PART NUMBER	ROYAL PURPLE'S RECOMMENDATION
APPLICATION	OEM SPEC # / PART #	ROYAL PURPLE RECOMMENDED
<b>CHRYSLER / JEEP</b>	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 & up (75W-85)	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
<b>FORD MOTOR CO.</b>	ESP-M2C166-H Mercon F3Z2 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
<b>GENERAL MOTORS</b>	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



This is a general outline. Always follow manufacturer's recommendations or contact Royal Purple's Automotive Technical Support Dept. at 888-382-6300.

# TRANSMISSION LUBRICANT CROSS REFERENCE

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

This is a general outline. Always follow manufacturer's recommendations or contact Royal Purple's Automotive Technical Support Dept. at 888-382-6300.

TRANSMISSION	LUBRICANT SPEC / PART NUMBER	ROYAL PURPLE'S RECOMMENDATION
APPLICATION	OEM SPEC # / PART #	ROYAL PURPLE RECOMMENDED
JAGUAR / LAND ROVER	Shell TF 0753 Shell Spirax TS 90 Castrol SAF XO Castrol SAF Carbon Mod	Synchromax Max Gear 75W-90 Max Gear 75W-90 Max Gear 75W-90
MERCEDES BENZ / SMART CAR	MB 000 989 2603 MB 001 989 2603 MB 001 989 1703 (Hypoid Gear Oil) Shell ATF 3403 M115, MB 236.10, NAG1 Fuchs ATF 3353, MB 236.12 Castrol Manual BOT 328	Synchromax Synchromax Max Gear 75W-90 Max ATF  Max ATF Max Gear 75W-90
MITSUBISHI	Texaco MTX Fluid FM	XPR 5W-20
NISSAN	Castrol SAF-XJ Nissan Trans Oil R35 Special	Max Gear 75W-140 Synchromax
PORSCHE	000 043 300 38 000 043 304 71 000 043 300 37 Castrol BOT 338 (75W-80) Shell Spirax S5 ATF (75W-90) Burmah Carbon Mod (75W-90)	Synchromax HPS or XPR 10W-40 Max Gear 75W-90 Synchromax HPS or XPR 10W-40 Max Gear 75W-90
TOYOTA	V-160, 08885-01306 ( '93 & up Turbo Supra) Toyota Genuine LF Gear Oil	Synchromax  Synchromax

## MOTOR OIL

### HEAVY-DUTY

SAE 30	5-Gal. Pail	05030
	6-Qt. Case	06030
	1-Qt. Bottle*	01030
SAE 40	6-Qt. Case	06040
	1-Qt. Bottle*	01040
SAE 50	5-Gal. Pail	05050
	6-Qt. Case	06050
	1-Qt. Bottle*	01050

### MULTI-GRADE

0W-20	5-Gal. Pail	05020
	5-Qt. Case	54020
	5-Qt. Bottle*	51020
	6-Qt. Case	06020
	1-Qt. Bottle*	01020
5W-20	5-Gal. Pail	05520
	5-Qt. Case	54520
	5-Qt. Bottle*	51520
	6-Qt. Case	06520
	1-Qt. Bottle*	01520
5W-30	5-Gal. Pail	05530
	5-Qt. Case	54530
	5-Qt. Bottle*	51530
	6-Qt. Case	06530
	1-Qt. Bottle*	01530
10W-30	5-Gal. Pail	05130
	5-Qt. Case	54130
	5-Qt. Bottle*	51130
	6-Qt. Case	06130
	1-Qt. Bottle*	01130
10W-40	5-Gal. Pail	05140
	6-Qt. Case	06140
	1-Qt. Bottle*	01140
15W-40	5-Gal. Pail	05154
	4-Gal. Case	44154
	1-Gal. Bottle*	04154
	6-Qt. Case	06154
	1-Qt. Bottle*	01154

## MOTOR OIL

20W-50	5-Gal. Pail	05250
	6-Qt. Case	06250
	1-Qt. Bottle*	01250
0W-40	6-Qt. Case	06484
	1-Qt. Bottle*	11484
5W-40	5-Gal. Pail	05540
	6-Qt. Case	06540
	1-Qt. Bottle*	01540

### HPS – HIGH PERFORMANCE STREET OIL

HPS 5W-20	5-Gal. Pail	35520
	6-Qt. Case	36520
	1-Qt. Bottle*	31520
HPS 5W-30	5-Gal. Pail	35530
	6-Qt. Case	36530
	1-Qt. Bottle*	31530
HPS 10W-30	5-Gal. Pail	35130
	6-Qt. Case	36130
	1-Qt. Bottle*	31130
HPS 10W-40	5-Gal. Pail	35140
	6-Qt. Case	36140
	1-Qt. Bottle*	31140
HPS 20W-50	5-Gal. Pail	35250
	6-Qt. Case	36250
	1-Qt. Bottle*	31250

### HMX – HIGH MILEAGE MOTOR OIL

HMX 5W-30	5-Qt. Case	11749
	5-Qt. Bottle*	11748
	6-Qt. Case	11745
	1-Qt. Bottle*	11744
HMX 10W-30	5-Qt. Case	11751
	5-Qt. Bottle*	11750
	6-Qt. Case	11747
	1-Qt. Bottle*	11746

\*AVAILABLE IN CASES ONLY

**RACING OILS****MULTI-GRADE MOTOR OILS**

XPR 0W-10	5-Gal. Pail	05009
	6-Qt. Case	06009
	1-Qt. Bottle*	01009
XPR 5W-20	5-Gal. Pail	05011
	6-Qt. Case	06011
	1-Qt. Bottle*	01011
XPR 3.1 (0W-5)	5-Gal. Pail	05205
XPR 5W-30	5-Gal. Pail	05021
	6-Qt. Case	06021
	1-Qt. Bottle*	01021
XPR 10W-40	5-Gal. Pail	05041
	6-Qt. Case	06041
	1-Qt. Bottle*	01041
XPR 20W-50	5-Gal. Pail	05051
	6-Qt. Case	06051
	1-Qt. Bottle*	01051

**NITRO PLUS RACING OILS**

Nitro Plus 50	5-Gal. Pail	05950
Nitro Plus 60	5-Gal. Pail	05960
Nitro Plus 70	5-Gal. Pail	05970

**2-CYCLE OILS**

HP 2-C	5-Gal. Pail	05311
	4-Gal. Case	44311
	1-Gal. Bottle*	04311
	12-Qt. Case	12311
	1-Qt. Bottle*	01311
Snow 2-C	5-Gal. Pail	05511
	4-Gal. Case	44511
	1-Gal. Bottle*	04511

**MOTORCYCLE OILS****MAX-CYCLE**

10W-30	6-Qt. Case	06314
	1-Qt. Bottle*	01314
10W-40	6-Qt. Case	06315
	1-Qt. Bottle*	01315
20W-50	6-Qt. Case	06316
	1-Qt. Bottle*	01316

**MARINE OILS****HPM - FC-W (4-STROKE)**

10W-30	12-Qt. Case	11583
	1-Qt. Bottle*	11582
10W-40	12-Qt. Case	11630
	1-Qt. Bottle*	11629

**TRANSMISSION FLUIDS****AUTOMATIC**

Max ATF	5-Gal. Pail	05320
	6-Qt. Case	06320
	1-Qt. Bottle*	01320

**RACING TRANSMISSION FLUIDS****AUTOMATIC**

Racing ATF	5-Gal. Pail	10154
	12-Qt. Case	11570
	1-Qt. Bottle*	11569

**TRANSMISSION FLUIDS****MANUAL**

Synchromax	5-Gal. Pail	05512
	12-Qt. Case	12512
	1-Qt. Bottle*	01512

\*AVAILABLE IN CASES ONLY



## GEAR OILS

### MAX GEAR

75W-90	15-Gal. Keg	16300
	5-Gal. Pail	05300
	12-Qt. Case	12300
	1-Qt. Bottle*	01300
75W-140	15-Gal. Keg	16301
	5-Gal. Pail	05301
	12-Qt. Case	12301
	1-Qt. Bottle*	01301
80W-90	5-Gal. Pail	05302
85W-140	15-Gal. Keg	16303
	5-Gal. Pail	05303
	12-Qt. Case	12303
	1-Qt. Bottle*	01303
SAE 90	5-Gal. Pail	05304

### MARINE - HPM GEAR LUBE

80W-90	5-Gal. Pail	11689
	12-Qt. Case	11688
	1-Qt. Bottle*	11687

## SPECIALTY LUBRICANTS

### FUEL SYSTEM CLEANER AND STABILIZER

Max-Clean	6x20-Oz. Case	11723
	20-Oz. Bottle*	11722
	12x6-Oz. Case	12754
	6-Oz. Bottle*	11754

### OCTANE BOOST & STABILIZER

Max-Boost	6x16-Oz. Case	06757
	16-Oz. Bottle*	11757

### DIESEL CETANE BOOSTER

Max-Tane	6x20-Oz. Case	06755
	20-Oz. Bottle*	11755
	6x10-Oz. Case	06756
	10-Oz. Bottle*	11756

### POWER STEERING FLUID

Max EZ	12x12-Oz. Case	12326
	12-Oz. Bottle*	01326

## SPECIALTY LUBRICANTS

### RADIATOR COOLANT ADDITIVE

Purple Ice	12x12-Oz. Case	12600
	12-Oz. Bottle*	01600

### GUN OIL

RP Gun Oil	12x4-Oz. Case	10039
	4-Oz. Can*	10036

### PENETRATING FLUID

Maxfilm	12x11-Oz. Case	15000
	11-Oz. Can*	05000
	12X4-Oz. Case	12035
	4-Oz. Can*	10035

### CHAIN LUBRICANT

Max-Chain	12X4-Oz. Case	12407
	4-Oz. Can*	11407

### COMPRESSOR LUBRICANT

Synfilm Recip. 100	4-Gal. Case	44513
	1-Gal. Bottle*	04513
	12-Qt. Case	12513
	1-Qt. Bottle*	01513

### ASSEMBLY LUBRICANT

Max-Tuff	12x8-Oz. btls	12335
	8-Oz. Bottle*	01335
	50x2-Oz. btls	10552
	2-Oz. Bottle*	10553

### ENGINE BREAK-IN OIL

Break-In Oil	12-Qt. Case	11497
	1-Qt. Bottle*	11487

### MULTI-PURPOSE GREASE

Ultra-Performance Grease	30 Tube Case	30312
	10 Tube Case	10059
	1 Tube *	01312

\*AVAILABLE IN CASES ONLY

**ROYAL PURPLE FILTER CROSS REFERENCE CHART**

<b>MOBIL 1</b>	<b>FRAM</b>	<b>WIX</b>	<b>K&amp;N</b>	<b>PUREONE</b>	<b>ROYAL PURPLE</b>
M1-107	PH3506	51042	HP-1007	PL14006	10-44
M1-101	PH3387A	51040	HP-1001	PL10111	10-47
M1-113	PH10060	57060	HP-1017		10-48
M1-104	PH9688	51334	HP-1004	PL14459	10-2808
M1-104	PH3593A		HP-1004		10-2808
M1-102	PH3614	51348	HP-1002	PL10241	10-2835
M1-103	PH4967	51394	HP-1003	PL14476	10-2840
M1-110	PH7317	51356,51357	HP-1010	PL14610,PL14620	10-2867
M1-108	PH6607,PH9715	51365	HP-1008	PL14622	10-2876
M1-111	PH30,PH8873	51069,57099	HP-1011,HP-2002	PL15313	10-454
M1-213	PH9010	57302	HP-1014	PL15317	20-2009
M1-204	PH16	51085	HP-2004	PL14670	20-253
M1-209	PH3600	51516	HP-2009	PL20195	20-400
M1-209	HP10		HP-2009		20-400
M1-212	PH10575	57045	HP-2011	PL22500	20-500
	PH10590	57502	HP-7019		20-500
M1-201	PH3980	51036	HP-2001	PL24011	20-51A
M1-201	HP11		HP-2001		20-51A
M1-205	PH2870A	51088,51342	HP-2005	PL20252	20-561
M1-205			HP-2005		20-561
M1-206	PH3675,PH9837	51522	HP-2006	PL25288	20-59
M1-210		57063	HP-2010		20-820
M1-210	PH2	51372,57899	HP-2010	PL24651	20-820
M1-302	PH5	51060	HP-3002	PL34631	30-1218
M1-302	HP4	51061	HP-3002		30-1218
M1-303	PH9100	57202	HP-3003	PL35399	30-2999
M1-301	PH8A	51515	HP-3001	PL30001	30-8A
M1-301	PH2815,PH3569	51452	HP-3001		30-8A
M1-301	HP1	51333	HP-3001		30-8A
M1-405	PH10890	57151			40-2051
M1-403	PH3976A	51607,57620,57620XE	HP-4003	PL45335	40-780
M1C-651	CH9549	57311,57314	HP-7009	PL45515,PL45526	50-2017
M1-601	PH3786	51734	HP-6001	PL44872	50-2286

**OIL FILTER CROSS REFERENCE CHART**

Find the filter that is  
right for your vehicle.



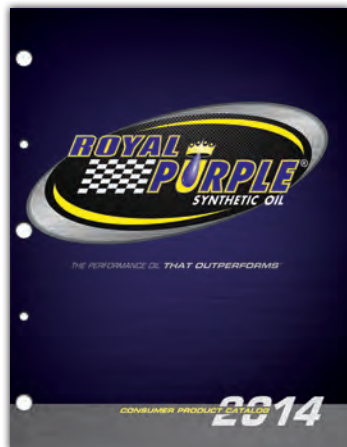
Royal Purple strives to offer high quality wearables that reflect the caliber of its products. Royal Purple has selected Spectrum as the licensed vendor for Royal Purple apparel. You can view the entire line of shirts, hats and other licensed merchandise by visiting [royalpurple.com](http://royalpurple.com) and clicking on the RP Gear link.





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